

JAMES A CLOW & SONS CHICAGO

# CONTENTS ARRANGED IN DEPARTMENTS.

Dep	t.	Pages.
Α	Pipe, Street Work and Metals,	1-25
В	Fittings—Cast Iron, Malleable, Brass, Steel, etc.,	26 - 71
C	Valves and Coeks,	72 - 101
D	Gate Valves,	102-114
Ε	Engine and Boiler Trimmings,	115-138
F	Heating Apparatus and Miseellaneous Specialties,	139—157
G	Gas Fixture Fittings, etc.,	158-168
Н	Corporation Cocks and Hose Brass Goods	169-189
J.	Hose, Packing, Pumps and Greenhouse Fittings,	190-213
L	Tools, _ , _ 1 /	214 - 251
	:/ Mr PRUMBING. Pala C	7
M	Water Closets and Trimmings,	255 - 314
N	Urinals and Trimmings,	315-329
Р	Baths and Showers,	330-373
R	Lavatories, Drinking Fountains, Marble, and Basins,	374-413
S	Laundry Tubs, Sinks, Slop Sinks, Cesspools, etc	414 - 454
Т	Bath and Lavatory Trimmings,	455 - 465
V	Stop Coeks, Bibbs, Basin and Bath Coeks; Miseel-	

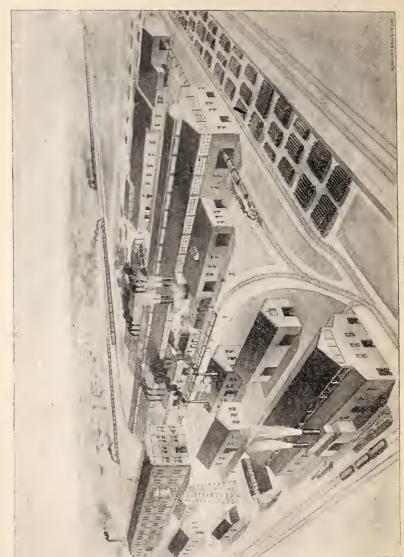
For General Index, see pages 544-552.

Useful Rules and Information, \_ - - - -

laneous Brass Goods, \_ \_ - - -

466 - 509

535—536 537—543 Digitized by the Internet Archive in 2017 with funding from Columbia University Libraries



MAIN WORKS, James B. Clow & Sons, Newcomerstown, Ohio.

1899

# ILLUSTRATED CATALOGUE

OF

# JAMES B. CLOW & SONS

MANUFACTURERS OF

# SUPPLIES

FOR

WATER AND GAS WORKS, RAILROADS, CONTRACTORS, PLUMBERS,
STEAM AND GAS FITTERS.

GAS, STEAM AND WATER PIPE, STEAM AND WATER HEATING APPARATUS,
PUMPS, FITTINGS,
BRASS GOODS AND SANITARY SPECIALTIES.

FOUNDRIES AND PIPE WORKS,
NEWCOMERSTOWN,
OHIO.

NORTHWEST BRANCH,
WESTERN AVENUE AND BLOOMINGOALE ROAD,
CHICAGO.

ENGLEWOOD BRANCH,
-61ST, 62D AND STATE STREETS,
CHICAGO.

GENERAL OFFICES AND SALES ROOMS,

222 AND 224 LAKE STREET, CHICAGO. Entered according to Act of Congress, in the year 1899,
By James B. Clow & Sons,
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# Introductory.

With cordial greeting we present to our friends in the trade our Illustrated Catalogne for 1899. In its preparation we have adopted the plan of classifying each line of goods in a separate department. We believe this method will greatly aid the buyer when ordering, and increase the value of the catalogue as a book of reference.

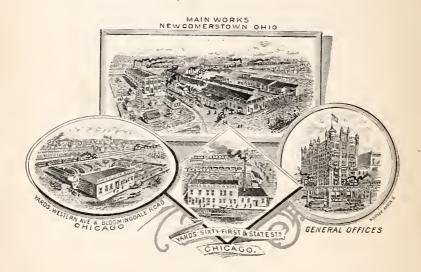
It is our desire to assist the trade in every possible manner, and we trust our object has been attained in this publication. Our experts and inventors are constantly devising new methods and systems in accordance with the most recent developments of sanitary and mechanical principles, thus keeping abreast of the progress of science. Many new inventions are, therefore, herein described and illustrated. If you miss from the following pages some appliances which common usage has made familiar, be assured they have only been omitted because they have become obsolete. In such cases it will be found that other devices, more convenient and better in every respect, have been substituted.

Suggestions we are always glad to receive, whether for new designs and fittings, or the improvement of existing ones. If you encounter difficulties in your work, all our technical knowledge is at your command. Whatever advantages we possess are the common property of our friends and a part of our good will. It is a genuine pleasure to be of service to our patrons.

We solicit correspondence on subjects of mutual interest.

Respectfully yours,

JAMES B. CLOW & SONS.



#### SPECIAL NOTICE

Monthly settlements, unless otherwise agreed.

Bank remittances must be made with Chicago or New York exchange.

When ordering, give department letter as well as plate number, also details according to catalogue description, and thus save time and correspondence and avoid confusion.

Specifications for goods not standard should be explicit and complete, and, when possible, accompanied by sketch.

Definite instructions as to route, packing, insurance, etc., should accompany each order.

Boxing charged at cost: Cartage at lowest rates: Goods not insured unless so ordered.

As questions constantly arise regarding the responsibility of shipper, carrier and consignee, for loss of and damage to goods, etc., in transit, and in order to obviate lengthy correspondence concerning the same, we beg to call special attention to the following:

Our responsibility ceases as soon as goods are delivered in good order and condition at railroad depot or wharf in this city, and a receipt taken for them. If the carriers insist on our signing a release or other document having reference to their liability, before they receive the goods, of course we must comply; that will not, however, in any way affect the right of the party to whom they are consigned (who is the real owner) to recover damages for any carelessness or negligence on the part of the carrier; but it should be distinctly understood that we, as senders, have no legal claim after the goods are delivered to the carriers properly consigned, as the ownership has passed from us to the consignee.

Orders cannot be countermanded without our consent; this is especially true of goods other than standard.

Goods returned will not be accepted by us, unless arrangements for such return have been previously made by correspondence. Parties returning goods must be responsible for their delivery in good condition, and, unless otherwise agreed, must pay shipping expenses.

Claims for corrections or deductions must be made within ten days after receipt of goods.

Discount sheets will be issued promptly upon change of market prices, but all quotations are subject to change without notice.

Contracts are subject to delays from strikes, accidents, or causes beyond our control.

Correspondence should be addressed to the firm and not to individuals, that it may receive our immediate attention.

Orders promptly and carefully executed.

Please destroy previous editions of our catalogue.

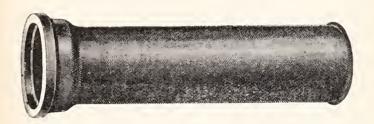
Respectfully yours,

JAMES B. CLOW & SONS.



#### CAST-IRON PIPE CULVERTS

MORE PERMANENT THAN WOOD AND CHEAPER THAN MASONRY.



For use as Culverts, Cast-Iron Pipe has fully proven its superiority over any material heretofore used. Masonry is expensive and easily destroyed, while Cast-Iron is cheap and practically indestructible. It is preferable to wrought-iron or steel, as the latter materials quickly rust. In case of washouts, Cast-Iron Pipe is never damaged; hence the culverts can

easily be repaired.

Cast-Iron Pipe is particularly advantageous in replacing old box culverts that have, by reason of decay or inferior foundation, become unfitted for use. The smaller sizes can be used to advantage at country cross-roads where, heretofore, wooden box may be perparently the wooden box must be replaced every few years, and the cost is practically the same. The Cast-Iron Culvert can be built in less time than any other style. Ordinarily, a single culvert is used, but we have supplied 48-inch pipe for a culvert where five pipes were lad parallel to each other. The culvert was placed at a point where, during certain seasous of the year, washouts were likely to occur. The five 48-inch pipes now take care of the increased water flow and prevent further damage to the track. To this particular railroad we have sold, within the past four years, over fifteen thousand tons of culvert pipe which, their chief engineer reports, gives general satisfaction.

In many states it is used, practically to the exclusion of all other materials, in the construction of culverts on all public roads. Wherever used it will, under all circumstances, prove itself to be the only perfect material for constructing perma-

nent culverts.

#### CAST-IRON CULVERT PIPE.

SIZE INCHES	4	6	8	10	12	16	20	24	30	36	42	48
THICKNESS INCHES LIGHT, WEIGHT PER FOOT POUNDS	16 20	76 30	7 6 40	$\frac{1}{2}$ $55$	1 70	104	135	200	250	350	1 450	1 ½ 600
THICKNESS INCHES MEDIUM, WEIGHT PER FOOT POUNDS	1 22	33	12 42	7 g 60	7 g 75	125	160	13 215	275	1 385	1 g 500	1¼ 665
THICKNESS INCHES STANDARD, WEIGHT PER FOOT . POUNDS	9 16 24	1 6 36	9 16 47	ਜ਼ 67	82 82	3 140	195	230	1 310	1 ½ 435	1‡ 550	1½ 775
THICKNESS INCHES HEAVY, WEIGHT PER FOOT POUNDS	8 28	- <del>5</del> 40	52	11 82	11 16 90	1 170	1 215	1½. 250	1 ½ 350	1 ĝ 475	18 600	1§ 865

#### CAST-IRON PIPE.



A\_1

# CAST-IRON WATER PIPE. TABLE OF WEIGHTS AND THICKNESSES USED UNDER DIFFERENT PRESSURES.

SIZE INCHES	3	4	6	8	10	12	16	20	24	30	36	42	48
THICKNESS, STANDARO INCHES WEIGHT PER FOOT FOR 100 LBS. PRESSURE PER SQ. IN.	18	$\frac{1}{2}$ 22	$\frac{1}{2}$ 33	1/2 45	78 60	16 75	125	197	1 <del>1</del> 2 5 0	1½ 350	18 475	1 § 600	11 775
THICKNESS, MEDIUM IHCHES WEIGHT PER FOOT FOR 150 LBS. PRESSURE PER SQ. IH.	17 19	17 23 23	13 35	7°5 50	116	11 16 95	150	1 225	1¼ 300	1‡ 425	1½ 600	1§ 800	13 1000
THICKNESS, HEAVY INCHES WEIGHT PER FOOT FOR 200 LBS. PRESSURE PER SQ. IH.	7 g 20	7 8 24	76 38	57	13 80	13 110	1 175	1± 250	1 % 350	1 j	13 750	2 1000	2 1250

Conditions under which Water Pipe is used vary and we can make Cast-Iron Pipe to meet any requirements. The extra cost between a standard weight and the weight given for the duty required, as shown in the tables, is very slight and the question of weight to be used should have the careful consideration of any person ordering Cast-Iron Pipe.

All Water Pipe is coated with tar and tested to a hydrostatic pressure of 300 pounds per square inch.

#### CAST-IRON GAS PIPE.

SIZE IHCHES	3	4	Ġ	8	10	12	16	20	24	30	36	42	48
THICKNESS INCHES WEIGHT PER FOOT POUNOS	8 16	8 20	7 <sup>7</sup> € 30	7 16 40	1 55	1 70	8 104	11 150	190	18 277	3 350	3 383	1 t 600

Gas Pipe is not coated unless so ordered. It is tested to a hydrostatic pressure of 300 pounds per square inch.

#### TABLE OF LEAD AND JUTE REQUIRED TO CALK THE JOINTS OF CAST-IRON PIPE.

SIZE INCHES	3	4	6	8	10	12	16	20	24	30	36	42	48
LEAD PER JOINT POUNOS JUTE PER JOINT OUNCES	3	3½	5	7	9	13	17	21	24	30	40	60	80
	8	9	12	15	17	24	29	32	37	50	60	\$0	120

We furnish specially prepared Jute for calking pipe.

#### CAST-IRON FLANGED PIPE.



Our stock of Flanged Pipe and special patterns is very complete, sizes rauging from 4-inch to 36-inch. Estimates furnished on application.

#### SPECIALS FOR CAST-IRON PIPE.



A-10. REDUCER.



A-13, INCREASER.



A-16. OFFSET.



A-19. Y BRANCH.

REDUCERS. A-10. INCREASERS. A-13. OFFSET.

Y BRANCHES. A-19.

Size, Inches.	Weight, Pounds.	8ize, Inches.	Weight, Pounds.	Size, Inches.	Weight, Pounds.	Size, Inches.	Weight, Pounds.	Size, Inches.	Weight, Pounds.
4x 3	40	12x 4	200	3x 4	48	4x 6	80	4x 4	155
6x 4	100	14x12	475	4x 6	108	4x24	106	6x 6	235
6x 3	80	14x10	430	4x 8	162	6x 6	135	6x 4	218
8x 6	135	14x 8	340	6x 8	164	6x12	160	8x 8	312
8x 4	115	16x12	395	4x10	185	6x24	207	8x 6	300
10x 8	194	16x10	330	6x10	195	8x12	220	10x10	500
10x 6	180	20x16	690	8x10	204	10x12	285	12x12	750
10x 4	158	20x12	540	6x12	230	12x12	380		
12x10	240	24x16	920	8x12	318				
12x 8	230	30x24	1690	10x12	332				
12x 6	200	36x30	1730	•					





A-22. SPLIT TEE.



A-25. SPLIT SLEEVE.



A-28. TAPPED PLUG.

SIZE INCHES	3	4	6	8	10	12	14	16	18	20
SPLIT TEE EACH SPLIT SLEEVE EACH TAPPED PLUGS EACH	5.00 2.50 1.50	6.25 2.50 1.50	8.25 3.00 1.75	10.75 5.50 2.75	12.50 7.50 3.50	15.00 10.00 4.00	18.75 12.00 5.00	21.25 16.00 5.00	25.00 20.00	30.00 25.00

Split Tees-made to order only, any size outlet required.

Tapped Plugs-Best Connection made for connecting Wrought and Cast-Iron Pipe. Plugs can be tapped for any size required.

'Split Sleeves-An excellent special for repairing.

We make all sizes and reductions in Specials, from 2 to 48 inch, and carry a large stock constantly on hand, both at our Foundries and in Chicago. If in stock, and unless otherwise specified, we will fill all orders with Bell End Specials. The above weights are given as standard simply for the purpose of estimating, and are approximately correct. All our Specials are made with full water-way and easy bends.

All descriptions of special water-works castings made to order, including Flanged Pipe and all special pump connections.





## SPECIALS FOR CAST-IRON PIPE.



A-34. EIGHTH BEND, 450.



SIXTEENTH BEND, 22%°.



A-40. TEE.



A-43. CROSS.

A-31. QUARTER BEND.

A-34. A-37. EIGHTH BEND. SIXTEENTH BEND.

A-40. TEES.

A-43. CROSSES.

Size, Inches.	Weight, Pounds.	Size. Inches.	Weight, Pounds.	Size, Inches.	Weight, Pounds.	Size, Inches.	Weight, Pounds	Size, Inches,	Weight, Pounds.
3	40	3	45	4	50	3x 3x 3	80	3x 3x 3x 3	100
4	60	4	55	6	80	4x 4x 4	120	4x 4x 4x 4	160
6	100	6	85	8	105	4x 4x 3	94	6x 6x 6x 6	225
- 8	160	8	145	10	160	6x 6x 6	180	6x 6x 4x 4	210
10	240	10	190	12	206	6x 6x 4	160	8x 8x 8x 8	325
12	300	12	300			8x 8x 8	280	8x 8x 6x 6	315
14	400	14	430			8x 8x 6	260	8x 8x 4x 4	285
16	700	16	485	)		8x 8x 4	240	10x10x10x10	410
18	800	18	820			8x 8x 3	220	10x10x 8x 8	400
20	1000	20	1200			10x10x10	350	10x10x 6x 6	380
24,	1500	24	1450			10x10x 8	345	10x10x 4x 4	360
30	2500	30	2200			10x10x 6	295	12x12x12x12	546
	V					10x10x 4	- 275	12x12x10x10	480
						12x12x12	450	12x12x 8x 8	440
						12x12x10	385	12x12x 6x 6	400
						12x12x 8	380	12x12x 4x 4	357
						12x12x 6	350	16x16x16x16	1020
						12x12x 4	320	20x20x20x20	1600
						16x16x16	770	24x24x24x24	2400
				1		16x16x12	750	30x30x30x30	3600
						16x16x10	740	36x36x36x36	6160
					٠ ا	16x16x 8	736	48x48x48x48	10500
						16x16x 6	700		
						20x20x20	1390		
						24x24x24	2000		
7						30x30x30	2880		
		:				36x36x36	4920		
						48x48x48	9000		



A-46. SLEEVE.





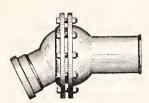
A-52. TAPER PLUG.

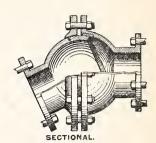


A-56. CAP.

SIZE INCHES	3	4	6	8	10	12	14	16	18	20	24	30	36	48
SLEEVES, WEIGHT . LBS. PLUGS, WEIGHT . LBS. TAPER PLUGS, WEIGHT . LBS. CAPS, WEIGHT LBS.	40 10 20	50° 10 10 30.	80 20 18 40	110 30 30 75	146 45 44 100	190 65 53 120	212 70	240 95	360 125	557 150	710 185	1175 370	1222	1650







A-59. GAS DRIP BOXES.

A-62. FLEXIBLE BALL JOINT.

#### GAS DRIP BOXES.-A-59.

SIZE INCHES	3	4	6	8	10	12
WEIGHT	363	403	443	652	1675	1775

Our new Drip Box has given excellent satisfaction. The body is cast solid, the cap fits into socket, the opening in cap is for 1-inch pipe and both are arranged for head joint.

#### BALL JOINTS .- A-62.

,															
	SIZE	INCHES 4 6 8		10	12	14	16 18		20	24	30	36	48		
ı	PRICE	, EACH	16.00	20.00	30.00	32.00	33.00	60.00	70.00	90.00	100.00	120.00	200.00	300.00	450.00

For Flexible Joints, screwed ends, see page 63.



#### LAMP POSTS AND GAS LAMPS.

FIGURE							A-65	A-66
COMPLETE LANTERN ONLY POST ONLY APPROXIMATE WEIGHT HEIGHT FROM GROUND						. EACH . EACH POUNDS	4.00 11.00 200	36.00 18.00 18.00 250 9 ft. 2 in.

Our Lamp Posts are well made, light and strong.



A-66





A-72. LEAD PIPE.

A-74. SHEET LEAD

#### WEIGHTS AND SIZES OF LEAD PIPE .- A-72.

CALIBER.	Weight. Per Foot.	CALIBER.	Weight Per Foot.	CALIBER.	Weight. Per Foot.	CALLBER.	Weight. Per Foot
‡ in. Tubing  § in. Aqueduct. Ex. Light Medium Strong Ex. Strong. † in. Aqueduct. Ex. Light Light Medium Strong Ex. Light Light Medium Strong AA Ex. Strong § in. Aqueduct. Ex. Light Light Medium Strong Strong Ex. Strong Ex. Strong Ex. Light Light Medium Strong Strong Ex. Light Light Medium Strong Ex. Strong		\$\frac{1}{2}\$ in. Ex. ex. Strong. \$\frac{1}{2}\$ in. Aqueduct.  Ex. Light. Light. Medium. Strong. Ex. Strong. Ex. Strong.  \$\frac{1}{2}\$ in. Aqueduct. Ex. Light. Light. Light. Light. Medium. Strong. Ex. Ex. Light. Light. Medium. Strong. Ex. ex. Strong. Ex. ex. Strong. Ex. Ex. Light. Light. Medium. Strong. Ex. Ex. Light. Light. Light. Medium. Light. Light. Light. Medium.	1	Medium	6 12 3 3 4 4 5 6 7 9 3 12 4 5 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	2½ in. Waste Light Medium, ¼ Thick Strong, ¼ Ex. Strong, ⅓ " Ex. ex. Strong, ⅓ " 3 in. Waste Light Medium, ¼ Thick Strong, ¼ " Ex. Strong, ¼ " Ex. Strong, ¼ " Ex. ex. Strong, ¾ " Ex. ex. Strong, ¾ " Ex. ex. Strong, ¼ Thick Ex. Strong, ¼ " in. Waste  Medium Strong, ¼ Thick Ex. Strong, ¼ " Ex. ex. Strong, ¾ "	6 8 11 14 17 3 8 6 3 9 12 16 20 15 15 15 10 16 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20

Coils of Supply. Pipe weigh about 200 pounds; Aqueduct about 90 pounds; Suction Pipe 100 to 180 pounds each.

#### PURE BLOCK TIN PIPE.

-	SIZE, INSIDE DIAMETER .	INCHES	3 16	1	र्गंड	<u>a</u>	1.0	2	34	1	11	11/2	2
1	WEIGHT PER FOOT	OUNCES	4	4, 5, 6	4, 5, 8	4, 6	6, 8	9, 12	12, 16	12	20, 28	24 and upward	32 and

#### WEIGHTS AND SIZES OF SHEET LEAD, -A-74.

	THICKNESS INCHES POUNDS PER SQUARE FOOT	2 4 2 ½	1 10 3	18 3½	1 6 1 4	14 41 22	1 F	1 0 6	1 7	1 8	9 84 9	10 10	11	† 12	
- 1							1				7				4

Stock Rolls of Sheet Lead average 20 feet in length and from 7 feet to 9 feet 2 inches in width. Special weights and lengths rolled to order on short notice.



Pigs weigh about 100 pounds. Market rates.

BLOCK TIN

A-76.

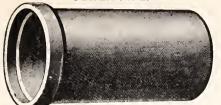
Pigs weigh about 100 pounds. Market rates. Bars weigh about 1½ pounds. Market rates.



40-60 Solder. Market rates.

Half and Half. Market rates.

#### SEWER PIPE.



A-81. SOCKET JOINT.

SIZE INCHES	2	3	4	5	6	8	9	10	12	15	18	20	24
PRICE PER FOOT	$\frac{12}{5}$	.15 8 7.068	20 10 12.566	.25 $13$ $19.635$	$\begin{array}{c} .30 \\ 16 \\ 28.274 \end{array}$	$\begin{array}{r} .40 \\ 24 \\ 50.265 \end{array}$	50 27 63.617	$     \begin{array}{r}       .60 \\       34 \\       78.539     \end{array} $	.75 $46$ $113.09$	1.00 65 176.71	$1.50 \\ 86 \\ 254.46$	1.75 $103$ $314.16$	$2.50 \\ 132 \\ 452.39$

Ring Pipe, same list as above. Made only in sizes 6, 9, 12, 15, and 18 inches.



A-B2. Y BRANCH.



A-83. TEE BRANCH.



A-84. INCREASER.



A-85. REDUCER.

Y BRANCHES AND TEE BRANCHES.-A-82 and A-83.

SIZE INCHES	2	3	4	5	6	8	9	10	12	15	18	20	24
PER FOOT	25	30	40	50	.60	. 80	1.00	1.20	1.50	2.00	3.00	3.50	5.00

#### INCREASERS AND REDUCERS .- A-84 and A-85.

_								-		_				
812	E INCHES	2	3	4	5	6	8	9	10	12	15	18	20	24
PEF	R FOOT		.23	.30	.38	.45	.60	.75	. 90	1.13	1.50	2.25	2.63	3.75



A-86. 2-FOOT CURVE.



A-87. 1-FOOT CURVE.



A-BB. ELBOW.

CURVES AND ELBOWS .- A-86, A-87, and A-88.

SIZE INCHES	2	3	4	5	6	8	.9	10	12	15	18	20	24
EACH	.40	.50	.60	.75	1.00	1.50	1.75	2.10	2.75	3.75	4.75	5.75	8.00









A-92. RUNNING TRAP.

A-89. SLANT, 1 OR 2 FOOT.

SLANTS.-A-89.

SIZE INCHES	6	8	9	10	12	15	18	20	24
PER FOOT, LONG SIDE	.45	.60	.75	.90	1.15	1.50	2.25	2.65	3.75

#### TRAPS.-A-90, A-91 and A-92.

SIZE INCHES	2 3	4	5	6	8	9	10	12	15	18	20	24
EACH EACH	1.00 1.20 1.50 1.70											







A-94. RUNNING TRAP WITH VENT.



A-95. RING PIPE.



-96. RING.

#### TRAPS.-A-93 and A-94.

SIZE INCHES	2	3	4 .	5	6	8	9	10	12	15
A-93 EACH A-94 EACH	1.50	1.70	2.10	1.50 2.50	2.00 2.90	3.00 3.70	3.50 4.50	4.50 5.50	6.00 8.50	8.00 10.50

Ring Pipe, same list as Socket Joint Pipe, made only in sizes 6, 9, 12, 15, and 18 inches.



A-97. V BRANCH.



A-98. DOUBLE Y BRANCH.



A-99. DOUBLE TEE BRANCH.

DOUBLE BRANCHES .- A-97, A-98, and A-99.

SIZE	INCHES		4	5	6
EACH		.90	1.20	1.50	1.80

#### MANHOLE COVERS FOR VALVES AND SEWERS.



A-110. CHICAGO STANDARD MANHOLE CURB



A-111, CHICAGO STANDARD MANHOLE CURB WITH PERFORATED COVER.

CHICAGO STANDARD.	Diameter of Opening, Inches	Height above Flange, Inches	Projection of Flange, Inches.	Approximate Weight, Pounds.	Price, Complete.
4-110. CHICAGO STANDARD, WITH SOLID COVER EACH 111. CHICAGO STANDARD, WITH PERFORATED COVER . EACH	223 223	8‡ 8‡	$\frac{5\frac{1}{2}}{5\frac{1}{2}}$	481 465	10.00 10.00



A-112. SUBURBAN STANDARD MANHOLE CURB WITH SOLID COVER.



A-113. SUBURBAN STANDARD MANHOLE CURB WITH PERFORATED COVER.

SUBURBAN STANDARD.	Diameter of Opening, Inches.	Height above Flange, Inches.	Projection of Flange, Inches.	Approximate Weight, Pounds.	Price, Complete.
A-112. SUBURBAN STANDARD, WITH SOLID COVER EACH A-113. SUBURBAN STANDARD, WITH PERFORATED COVER EACH	223	81	5½	331	7.50
	223	81	5½	315	7.50



A-114. CATCH-BASIN CURB, WITH SOLID COVER.



A-115. CATCH-BASIN CURB, WITH PERFORATED COVER.

CHICAGO STANDARD.	Diameter of Opening, Inches.	Height above Flange, Inches.	Projection of Flange, Inches.	Drainage Inlet, Inches.	Approximate Weight, Pounds	Price, Complete.
A-114, CATCH-BASIN CURB, EACH	223	8½	5½	4½ x 12	560	12.00
	223	8½	5½	4½ x 12	544	12.00



A-119. LIMESTONE CATCH-BASIN COVER.

#### LIMESTONE SEWER OR CATCH-BASIN COVERS.-A-119.

LIMESTONE COVER ONLY, 36 INCHES DIAMETER	. EACH	3.50
LIMESTONE COVER ONLY, 30 INCHES DIAMETER	. EACH	3.50
IRON MANHOLE PLATE ONLY, 18 INCHES DIAMETER	EACH	.75



A-121, SIDEWALK CATCH-BASIN CURB.



A-122, SIDEWALK DRAIN CURB.

#### SIDEWALK CATCH-BASIN CURB .- A-121.

SIDEWALK CATCH-BASIN CURB.	Diameter of Opening, Inches.	Projection of Flange, Inches.	Height above Flange, Inches,	Drainage Inlet, Inches.	Approximate Weight, Pounds.	Price. Each.
A-121, WITH LIGHT COVER EACH	194	3₺	5∦	4x10	190	5.70

#### SIDEWALK DRAIN CURB.-A-122.

SIDEWALK DRAIN CURB.	Diameter of Opening, Inches.	Diameter of Flange, Inches.	Height above Flange, Inches.	Approximate Weight, Pounds.	Price, Each
A-122, WITH GRATE EACH	8x12	24	4	125	3.75

Our Sidewalk Drain Curbs are used in sidewalks, driveways and gutters. They are very strong, and can be safely placed in gutters.



A-123. GUTTER CURB.



A-124. GUTTER CURB PAN.



A-125. GUTTER CURB GRATE.

#### GUTTER CURBS, PANS, AND GRATES. A-123, A-124, and A-125.

COMPLETE CUTTER CURR	PAN AND GRATE, APPROXIMATE WEIGHT, 310 POUNDS EACH	9.30
I COMPLETE GOTTER CORD	PAR ARD GRATE, APPROXIMATE WEIGHT, 510 TOOKSO	V.00
11		

Length of opening, 23% inches; width of opening, 13% inches; height above flange, 8% inches; projection of flange, 44 inches.













A-149.

# SERVICE BOXES, 2%-INCH DIAMETER.—A-140. FOR SERVICE COCKS 1%-INCH AND SMALLER.

NUMBER OF BOX	88	89 A	90 B	91 C	93 C	92 D	93 D	93 E	94 D	94 E	95 E	100 E	100 F
EXTENDING INCHES	12 .42	12-20 .46	18-26 .50		24-38 . 58	24-12 62							54-78 1 06

#### STANDARD SERVICE BOXES, 3-INCH DIAMETER.-A-141.

NUMBER OF BOX	0	1	1 ½	2	3	4	5	7	8
EXTENDING . INCHES	10	13-21½	18-28	24-39	32-48	34-58	42-66	48-72	72-96
	.66	.70	.76	. 82	1.00	1.10	1 26	1.36	2.00

#### SERVICE BOXES, 2%-INCH DIAMETER, WITH STOP-COCK HOLDER.-A-142.

NUMBER OF BOX		288	289	290	291	292	293	294	295	296	297	298	299	300
EXTENDING .	INCHES	.57	12-20 . 61	18-26 . 65	21-33 . 69	24-38 .73	24-42 77	36–48 87	36–54 91	42-57 95	42-60 1 01	48-66 1.11	54-72 1 15	54-78 1 21

#### STANDARD SERVICE BOXES, 3-INCH DIAMETER, WITH STOP-COCK HOLDER.-A-142.

				-					
NUMBER OF BOX	100	101	$101\frac{1}{2}$	102	103	104	105	107	108
EXTENDING INCHES	10 .81	13-21½ 85	18-28 91	24-39 97	32-48 1.15	34-58 1.25	42-66 1 41	48-72 1 51	72-96 2.15

#### SERVICE BOXES, 21/2-INCH DIAMETER, WITH ROD AND RING.-A-143.

NUMBER OF BOX	388	389	390	391	392	393	394	395	396	397	398	399	400
EXTENDING . INCHES	12 .67	12-20 .71	18-26 75	21-33 79	24-38 .83	24-42 87		36-54 1.01					54-78 1.31

#### EXTENSION SECTIONS FOR SERVICE BOXES.-A-144.

NUMBER OF BOX SECTION	151	152	153	154	155	156	157
INCREASING LENGTH OF BOX INCHES 2½-INCH DIAMETER	9	161	28	33	20	24	30
3-INCH DIAMETER EACH	40	. 45	.50	60	.45	,50	.60

A-145. - Enlarged Base for Service Boxes, 3-inch diameter, to allow use of 2-inch cocks, each 50 cents.









LARGE SERVICE BOX.

A-153. SQUARE HEAD ROADWAY UPPER.

#### VALVE BOXES WITH No. 6 BASE .- A-150. DIAMETER OF SHAFT, 5% INCHES.

NUMBER OF BOX	AAA	AA	A	В	С	СС	D	DD	Е	F	G	н
EXTENDING INCHES				36-48 3.45			42-65 3.65		60-72 3.90		72-84 4.30	72-96 4.45

Extension Section No. 58, to extend Valve Box 14 inches, 80 cents each.

#### BASES FOR VALVE BOXES.

STYLE OF BASE	No. 4 Round For 4-inch Valves,	No. 6 Round For 6 and 8-inch Valves.		No. 16 Round For 12 and 16-inch Round Valves.		
EACH	Deduct from price of Box 25	Included in price of Box	Add to price of Box . 30	Add to price of Box.	Add to price of Ilox . 45	Add to price of Box. 1.60

#### ROADWAY OR SMALL VALVE BOXES FOR 3-INCH OR SMALLER VALVES. - A-151. DIAMETER OF BOX, 44 INCHES. WITH FLANGE BASE.

NUMBER OF BOX	41 Q	42 Q	42 R	43 R	44 R	45 R
EXTENDING	18 to 24	27 to 34	27 to 42	34 to 48	39 to 54	46 to 60
	1.85	2.00	2.20	2,30	2 40	2 50

#### EXTRA LARGE SERVICE BOXES FOR 3-INCH SERVICE.-A-152. DIAMETER OF BOX, 44 INCHES. WITH OPEN BASE.

NUMBER OF BOX	441 Q	142 Q	142 R	143 R	144 R	145 R
EXTENDING . INCHES	18 to 24	27 to 34	27 to 42	34 to 48	39 to 54	46 to 60
	1.85	2.00	2.20	2 30	2 40	2.50

Extension Section No. 49. - To extend Roadway and extra large Service Boxes. 18 inches, 75 cents each. A-153.—Square Head Uppers for Roadway Boxes furnished to order at same price as Round.



973

A-156

EXTENSION SECTION.

METERS

A-158. IRON METER FRAME AND COVER.



A-160. CLOSED METER BOX.

#### EXTENSION METER BOXES FOR COVERING %-INCH METERS.

ſ			
ı	A-155.	EXTENDING 2 FEET 4 INCHES TO 3 FEET 2 INCHES EACH	3.50
		EXTENDING 14 INCHES EACH	1.00
ı	A-136.	EXTENDING 14 INChes	1.00
1			

#### IRON METER FRAMES AND COVERS.-A-158.

S	ZE	-	-	-	-	-		-			-	-	-	-	 -	-	-		-	-	-	-	-	-	-	-		II	CHES	24 x 24 Medium Weight.	24 x 24 Heavy.	24 x 24 Extra Heavy, for use in Streets.
Ε	ACH	١.			 	-	-	-	-	-	-	 	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		6.00	8.00	18.00

#### CLOSED METER BOXES.-A-160.

FOR %, %, AND 1 INCH METERS	EACH	6.00
1017 76, 76, AND 1 INCH METERS	CACH	0.00

By calking joints, this box can be made water-tight, and the Meter protected in winter by filling box with suitable packing.



A-161. GAS DRIP BOX.



A-162. STATIONARY VALVE BOX.

#### GAS DRIP BOXES, FOR COVERING PIPE.-A-161.

41		
ч		3,00
-1	LENGTH, 16 INCHES; OUTSIDE DIAMETER, 9 INCHES; FLANGE, 15 INCHES SQUARE	3.00
		1

#### EDDY FIRE HYDRANTS.

WITH BRASS SEAT AND RUBBER-FACED VALVE.



A-170. EDDY STANDARD.



WITH INDEPENDENT CUT-OFFS.



WITH AUXILIARY VALVE.

EDDY STANDARD FIRE HYDRANTS.
(From pavement to bottom of Connecting Pipe 5 feet.)

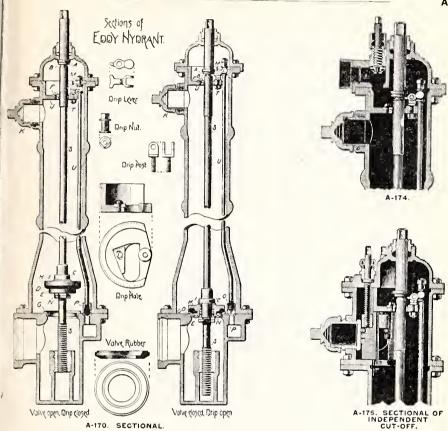
SIZE INLET INCHES	3	.4	4	4	4	6	6	6	6	8	8
INSIDE DIAM, STAND PIPE INCHES	5 }	43	51	6	68	5 ½	6	68	78	74	92
DIAM. SEAT RING INCHES	4	3	4	44	5	4	41	5	6	6	- 8
WITH ONE 21/2-IN. NOZZLE	31.00	28.00	31.00			31.50					
WITH TWO 21/2-IN, NOZZLES	34.00		34.00	35.50	38.50	34.50	35.50	38.50	49.00	50.25	
WITH THREE 21/2-IN, NOZZLES	36,00		36.00	37.50	40.50	36.50	37.50	40.50	51 00	52.25	
WITH ONE STEAMER NOZZLE	34.00		34.00	35.50	38.50	34.50	35.50	38.50	49.00	50.25	
WITH STEAMER AND ONE 21/2-IN. NOZZLE	36.00		36.00	37.50	40,50	36.50	37.50	40.50	51.00	52.25	
WITH STEAMER AND TWO 215-IN. NOZZLES	37.00		37.00	39.50	42.50	37.50	39.50	42.50	53,00	54.25	
FROST CASE, STANDARD LENGTH 5 FEET	5.00	4.50	5.00	5.60	6.50	5,00	5.60	6.50	7.50	7.50	11.0

A-171.—Independent Cut-off Valves, add to list 21-inch, each \$6.00; 4-inch, \$10.00.

# EDDY FIRE HYDRANTS OTHER THAN STANDARD LENGTH. FOR EACH 6 INCHES MORE OR LESS IN LENGTH, ADD TO OR DEDUCT FROM STANDARD LIST.

SIZE INLET INCHES	3	3	4	4	4	4	6	6	6	6	8	8	10
STAND PIPE	.60	.75 .50	. 60	.75 .50	.80 .58	,85 ,70	.75 .50	.80 .58	.85 .70	1.00	1.00	2.25 1.30	2.25 1.30

For directions in ordering Hydrants, see page 15.



#### THE EDDY FIRE HYDRANT.

When ordering Hydrants give following details: Size and form of Nut to open Hydrant; number and size of Nozzles; length from pavement to bottom of connection; size of connectiou to main, and whether it is desired to open Hydrants by turning to the right or left. In sending gauge for Hydrants we always prefer a Hydrant Cap, as this should give both thread of Nozzle and size and style of Nut. We carry constantly in stock, and term our standard pattern Hydrant, Five-foot Double Discharge, 24-inch Nozzles, 4-inch hub inlet Hydrants, Pentagon Nut, 3-inch sides, made to open turning to the left, and Chicago Standard Hose Thread. We recommend this pattern to all new companies.

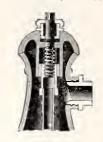
A-174 represents an Eddy Hydrant with special top used for filling sprinkling carts. This Valve is formed in the Hydrant cover so that it can be removed with the cover in the winter time and a regular cover substituted. By the use of this device the Hydrant can be left open during the summer for sprinkling purposes, and the small valve in the top of the cover used to let out and shut off the water. This reduces the wear on the main valve, as hydrants used for filling sprinkling carts are opened and elosed many thousand times a year. When the season for sprinkling is over, the cap can be removed and put in repair for the uext season's use.

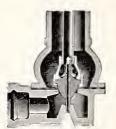
# SO CONTROL OF THE PARTY OF THE

A-182. AMERICAN STANDARD FIRE HYDRANT.

### AMERICAN FIRE HYDRANTS.

BRASS MOUNTED, RUBBER VALVE, AND POSITIVE WASTE.





A-182. SECTIONAL.



A-184. AMERICAN CORPORATION HYDRANT.

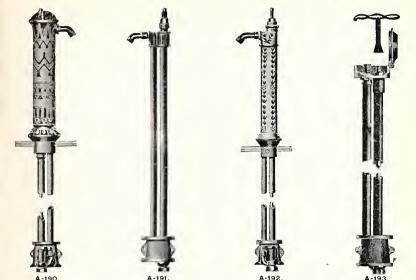
#### AMERICAN STANDARD FIRE HYDRANTS.-A-182.

Diameter of Inlet Pipe, Inches.	Pavement to Bottom of Connect- ing Pipe.	One 2½-inch Hose Nozzle.	Two 215-inch Hose Nozzles.	Three 2½-inch Hose Nozzles.	One Steamer Nozzle.	One Steamer and One 21 y inch Nozzle,	One Steamer and Two 215 inch Nozzles	Frost Case, Standard Length	Each Foot in Length of Stand Pipe, extra	Each Foot in Length of Frost Case, extra.
3	5	27.50	29.50	31.50	29.00	31.50	33,50	3.00	1.20	.50
4	5	32.00	34.00	36,00	34,00	36,00	38.00	5.00	1.50	1.00
5	5	38.00	40,00	42.00	40.00	42.00	44.00	5.00	1.75	1.00
6	5	47.00	49.00	51.00	49.00	51.00	53.00	6.00	2.25	1.25

For directions in ordering Hydrants, see bottom of page 15.

#### AMERICAN CORPORATION HYDRANT.-A-184.-Inlet Threaded for Iron Pipe.

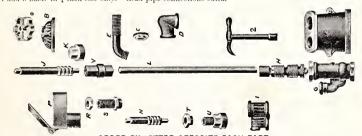
TO SET IN GROUND FEET	13	5	3	4	5	6	8	10
1½-INCH INLET AND OUTLET	11.85 16.30 22.25	12.00 16.45 22.50	12.30 $16.80$ $23.00$	12,65 17,15 23,50	13.00 17.50 24.00	13.50 18.00 24.75	15.00 19.50 27.00	17.00 22.00 30.00



HEAVY PÄTTERN No. 1. LIGHT PATTERN No. 2. PATTERN No. 5. STREET WASHER NO.
HYDRANTS AND STREET WASHERS, MCNAMARA PATTERN.

TO SET IN GROUND	2	$2\frac{1}{2}$	3	3½	4	4 ½	5	6	8
NO. 1 OPENING, %-INCH EACH NO. 2 OPENING, %-INCH EACH NO. 2 OPENING, 1-INCH EACH NO. 5 OPENING, 3-INCH EACH NO. 3 OPENING, %-INCH EACH NO. 3 OPENING, %-INCH EACH	5.00 3.25 5.75 4.25 3.45 5.15	5.20 3.40 6.00 4.45	5.30 3.50 6.25 4.55 3.70 5.55	5.45 3.75 6.50 4.70 3.75 5.75	5.50 3.75 6.65 4.75 3.90 5.85	5.65 4.00 6.75 4.90 4.00 6.00	5.75 4.25 7.00 5.00 4.15 6.20	6.05 4.75 7.50 5.30 4.45 6.40	6.50 5.25 8.00 5.75 5.15 7.65

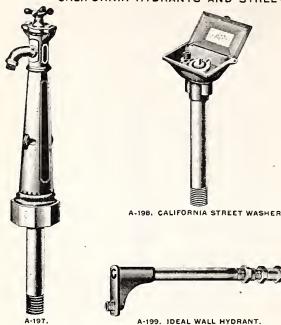
Nos. 1 and 5 made in 3-inch size only. Lead pipe connections extra.



ORDER BY LETTER OPPOSITE EACH PART.

PART	В	C	Ð	E	F	G	II	I	J	К	L	X	0	P	R	S	Т	U	٧	2
EACH	.25	.15	.15	.25	.20	1.00	.50	.40	.30	.35	.10	.30	.10	.50	.15	.25	.25	.35	.30	.10

#### CALIFORNIA HYDRANTS AND STREET WASHERS.





A 200 SELE CLOCIALS

#### CALIFORNIA HYDRANTS AND STREET WASHERS. To Set in Ground 18 Inches, A-197 and A-198.

SIZE, OUTLET AND INLET PIPE INCHES	3	1	11	1}	2
A-197	5.00	5 50	6,50	9.00	12.00
	3.50	4.00	5.00	7.50	10.00

#### AMERICAN SELF-CLOSING HYDRANT.-A-200.

TO SET IN GROUND	11	5	5 }	3	4	5	6	8
OPENING %-INCH EACH OPENING 1-INCH EACH	9.80	10.10	10.35	10.60	11.00	11.50	12.10	13.50
	12.70	13.50	13.90	14.30	14.75	15.30	16.00	18.50

#### IDEAL WALL HYDRANTS. A-199.

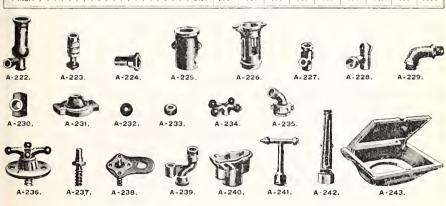
THICKNESS OF WALL . INCHES	9	13	18	24
1-INCH INLET AND OUTLET EACH	3.50	4.00	4 50	5.00
	5.50	6.00	6.50	7.00

This Hydrant is designed to be placed horizontally in the wall of a building, thereby offering no obstruction to a yard or lawn. The outside end of Hydrant is made of brass, to prevent the possibility of staining stone through corrosion.



#### PARTS OF AMERICAN HYDRANTS AND STREET WASHERS.

FIGURE	A-205	A-206	A-207	A-208	A-209	A-210	A-211	A-212	A-213
a <sub>6</sub> -INCH EACH EACH	1.75 2.00	1.00		.40		.40	.20	40 .50	.80
FIGURE	A-214	A-215	A-216	A-217	A-218	A-219	V-550	1-221	
As-INCH . EACH EACH		.20	.50	.20 .25	.70 .80	.70. .80	30 .40	.80	



#### PARTS OF IDEAL HYDRANTS AND STREET WASHERS.

FIGURE	A-222	A-223	A-224	A-225	7-556	A-227	A-228	A-229	A-230	A-231	A-232
	1.50 1.75				.80 1.00		.40 .50	.40	.20 .20	. 25 . 35	.06
FIGURE	A-233	A-234	A-235	A-236	A-237	A-238	A-239	A-240	A-241	A-242	A-243
34-INCH . EACH	.10	.20	.80 1.00	.70 1.00		.70 .80	.70 .80	,30 ,40	.20 .20	.60 .75	.70 .90



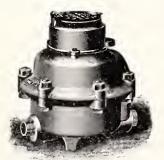
A-245. DISC WATER METER.



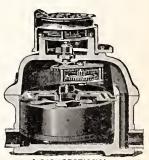
A-245. SECTIONAL.

#### DISC WATER METERS.-A-245.

SIZE INCHES	58	3	1	1 1	2	3	4	6
METERS EACH	10.00	15.00	20.00	37.50	62.50	106.25	237.50	475.00
CONNECTIONS PER METER	.50	.75	1.00	No Charge				
GREATEST PROPER QUANTITY PER MIN. CUBIC FEET	2	4	8	12	20	36	72	120
GREATEST PROPER QUANTITY PER MIN GALLONS	15	30	60	90	150	270	540	900
NET WEIGHT OF METER POUNDS	13	18	28	47	77	253	426	810
DIAMETER OF METER INCHES	6	7	81	108	121	181	22	279
LENGTH OF METER INCHES	78	9	10 7	128	151	24	29	361



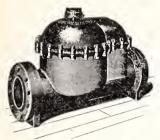
A-246. HERSEY WATER METER.



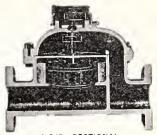
A-246. SECTIONAL.

#### HERSEY WATER METERS.-A-246.

SIZE INCHES	4	3	1	1 }	5	3	4	6
METERS EACH		22.50		50.00	75.00	150.00	300,00	600,00
CONNECTIONS PER METER	.50	.75	1.00	No Charge				
GREATEST PROPER QUANTITY PER MIN. CUBIC FEET	2	4	- 8	12	20	36	72	120
GREATEST PROPER QUANTITY PER MIN GALLONS	15	30	60	90	150	270	540	900
NET WEIGHT OF METER POUNDS	16	27	43	73	112	265	446	854
DIAMETER OF METER INCHES	7	81	108	121	131	181	22	275
LENGTH OF METER INCHES	7 €	9	115	12%	151	24	29	36 ₺







A-247. SECTIONAL.

#### TORRENT WATER METERS.-A-247.

SIZE INCHES	2	3	4	6	8	10	12
METERS EACH	50.00	106.25				1100.00	1562.50
CONNECTIONS PER METER	No Charge						
GREATEST PROPER QUANTITY PER MIN CUBIC FEET	32	72	128	288	513	800	1152
GREATEST PROPER QUANTITY PER MIN GALLONS	240	540	960	2160	3840	6000	8640
NET WEIGHT OF METER POUNDS	41	108	189	355	577	850	1200
DIAMETER OF METER INCHES	83	11	134	17	20	241	30
LENGTH OF METER	12	17	21	27	33	38	44

Prices are for Meters fitted with Regular Round Dials.

Prices for Meters fitted with Straight Reading Dials given below.

#### METERS WITH STRAIGHT READING DIALS.

SIZE	. INCHES	5	3	1	11/2	2	3	4	6	s	10	12
DISC		15.00	23.75	32.50	56.25	81.25	156.25	312.50	625.00		1125.00	1587.50

#### SIMPLEX METER-STRAINERS.

(				
SIZE	INCHE	§ §	3	1
PRICE	EAC	.38	. 56	.75

#### FISH TRAPS.

-	SIZE	CHES \$	3	1	11	5	3	4	6	8	10	12
	PRICE . F	EACH 2.50	2.50	5.00	7.50	7.50	12.50	18.75	25.00	50.00	75,00	100.00

#### EXTENSION DIALS.

SIZE INCHES	547	3	1	11	5	3	4	6	8	10	12
PRICE EACH	1.88	1.88	1.88	1.88	2.50	2.50	2.50	2.50	2.50	2,50	2.50

Extensions over three feet in length, 31 cents above list prices.

Prices given above include boxing or crating.

Those who have occasion to order parts of Meters should always give the Kind, Size and Number of the Meter for which the parts are wanted.

# STANDARD PIPE FOR GAS, STEAM, AND WATER.



A - 255.

#### BUTT-WELDED.

SIZE INCHES	ţ	ł	ĝ	į	1	ı	11
BLACK PER FOOT GALVANIZED PER FOOT TARRED PER FOOT FOR CUTTING EXTRA THREADS	.06‡ 09	.06½ .08½ .04½ .05	.06½ .08½ .05½ .05	.07 .09½ .07 .05	.08\\\.11\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	.113 .16 .124 .06	.15½ .22 .17

#### LAP-WELDED

			WELDE	<b>D</b> .					
SIZE INCHES	11	5	21	3	34	1	41	5	6
BLACK PER FOOT GALVANIZED PER FOOT TARRED PER FOOT FOR CUTTING EXTRA THREADS	.26 .31 30 .08	.35 .42 .39 .10	.52 .62 .58 .15	.68 .80 .73 .20	.81 .98 .91 .25	.95 1.16 1.10 .35	1.25 1.50 1.36 .45	1.42 1.75 1.58 55	1.85 2.20 2.00
SIZE INCHES	7	S	9	10	11	12	13	14	15
BLACK PER FOOT GALVANIZED PER FOOT TARRED PER FOOT FOR CUTTING EXTRA THREADS	2.45 3.00	2.95 3.70 1.00	3.75	4.75	6.00	7,00	8.00	9.50	11.00

#### DIMENSIONS AND WEIGHTS, BUTT-WELDED.

			,	· - WEEDE	U.		
NOMINAL SIZE INSIDE DIAMETER . INCHES	ŧ,	1	800	1 2	3	1	11
ACTUAL OUTSIDE DIAMETER . INCHES NOMINAL WEIGHT PER FOOT . POUNOS THICKNESS . INCHES THREADS PER INCH OF SCREW	068	54 0.42 088 18	.675 0.56 .091 18	.84 0.84 .109 14	1.05 1.12 .113 14	1.315 1.67 .134 111	1.66 2.24 .140 114

## DIMENSIONS AND WEIGHTS, LAP-WELDED.

NOMINAL SIZE INSIDE DIAMETER . INCHES	11	2	2 1/2	3	3 1	4	41/2	5	6
ACTUAL OUTSIDE DIAMETER . INCHES NOMINAL WEIGHT PER FOOT . POUNOS THICKNESS INCHES THREADS PER INCH OF SCREW	2.68	2.375 3.61 .154 11½	2.875 5.74 .204 8	3.5 7.54 .217 8	4 9.00 .226 8	4.5 10.66 .237 8	5 12.49 .246 8	5.563 14.50 .259 8	6.675 18.76 .280 8
NOMINAL SIZE INSIDE DIAMETER . INCHES	7	8	9	10	11	12	13	14	15
ACTUAL OUTSIDE DIAMETER . INCHES NOMINAL WEIGHT PER FOOT . POUNDS THICKNESS . INCHES THREADS PER INCH OF SCREW			9.625 33.70 .344 8	10.75 40.00 .366 8	12 45.02 .375 8	12.75 49.00 .375 8	14 54.00 .375 8	15 58.00 .375 8	16 62.00 .375 8

Owing to the frequent changes made by the manufacturers in the price list of Pipe, we issue current price lists, which will be furnished on application.

#### PRICE LIST

# STEAM, GAS AND WATER PIPE.

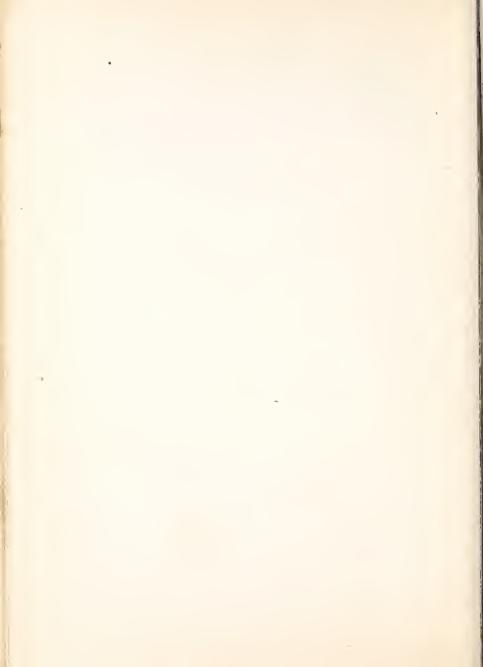
ADOPTED FEBRUARY 22, 1899,

# JAMES B. CLOW & SONS, Chicago.

0:	Standard	, per foot.	X Heavy	X X Heavy		
Size.	Black.	Galvanized.	Black.	Black.		
Inches.						
1,8	$.081_{2}$	.18	. 99			
14	. 081/2	.16	.17			
3/8	$.081_{2}$	.16	.17			
1/2	.1012	.17	.19	. 50		
3,4	. 1112	. 19	. 20	.60		
1	$16^{1}_{2}$	.26	.29	.75		
114	. 22	. 36	. 39	.85		
11/2	.27	.44	.48	1.10		
2	. 36	. 59	.63	1.60		
$2^{1/2}$	.57	.91	1.15	2.30		
3	.75	1.20	1.50	3.25		
31/2	.93	1.60	1.90	4.20		
4	1 07	1.75	2.15	4.85		
41/2	1.40	2.30	2 80	6.45		
5	1.55	2.55	3.10	7.35		
6	1.95	3 20	3.90	9.45		
6 7	2.53	4 30	5 25	11.85		
8	2 95	5.20	6.00	13.75		
ğ	3.80					
10	4.50					
11	5.30					
12	5.75					

## STANDARD WELL CASING.

Nominal Inside Diam Actual Outside Diam	2 24	214 21/2	2½ 2¾	2 <sup>3</sup> 4 3	3 3¼	3¼ 3½	3½ 3¾	$\frac{3\frac{3}{4}}{4}$	4 4¼	4¼ 4½	4½ 4¾
Price per foot	.28	.30	.32	.34	.37	.40	.43	.49	.54	.56	.58
Nominal Inside Diam. Actual Outside Diam.	4¾ 5	5 5%	51 <sup>3</sup> 6 5⅓	55/8 6	6 <sup>1</sup> / <sub>4</sub> 6 <sup>5</sup> / <sub>8</sub>	6 <sup>5</sup> / <sub>8</sub>	7½ 75%	75% 8	8½ 85%	85% 9	95/8 10
Price per foot	.63	.65	.67	.76	.91	1.00	1.07	1.30	1.43	1.60	1.90



#### STANDARD PIPE.

#### EXTRA STRONG.

			В	UTT-W	ELDE	D.		LAP-WELDED							
SIZE INCHES	1	1	3 2	1 2	3	1	1}	1 1	2	21/2	3	3 ½	4	5	6
BLACK PER FOOT	.13	.13	.13	14	.17	.23+	.31	.52	70	1.04	1.36	1.62	1.90	2.84	3.70
ACTUAL OUTSIDE DIA. INCH.	. 405	.54	.675	.84	1.05	1.315	1.66	1.90	2.375	2.875	3.50	4.00	4.50	5.563	6.625
APPROX. INSIDE OIA. INCH.	. 205	.294	.421	.542	. 736	.951	1.272	1.494	1 933	2.315	2.892	3.358	3.818	4.813	5.75
THICKNESS INCHES	.100	.123	.127	. 149	. 157	.182	194	203	.221	.280	.304	.321	.341	.375	. 437
NOMINAL WEIGHT PER FOOT	.29	.54	. 74	1.09	1.39	2.17	3.00	3.63	5.02	7 67	10.25	12.47	14.97	20.54	28.58

#### DOUBLE EXTRA STRONG.

	8	UTT-V	VELDE	D.	LAP-WELDED.							
SIZE INCHES	1/2	3	1	14	1 1	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	5	6
BLACK PER FOOT ACTUAL OUTSIDE DIAMETER INCHES APPROX. INSIDE DIAMETER INCHES THICKNESS INCHES NOMINAL WEIGHT PER FOOT	. 28 . 84 . 244 . 298 1 . 70	.34 1.05 .422 .314 2.44	47 1.315 .587 .364 3.65	62 1.66 .885 .388 5.20	1.04 1.90 1.088 .406 6.40	1 40 2.375 1 491 442 9.02	2.73 2.875 1.755 .560 13.68	3.50 2.284 .608	4.25 4.00 2.716 642 22.75	. 682	5.563 4.063	.875

Extra Strong and Double Extra Strong Pipe is always shipped without threads or couplings, unless otherwise specified. Threads and couplings on Extra Strong and Double Extra Strong Pipe are always charged extra. Quotations will not cover them unless they are clearly specified in requests for prices.

#### STANDARD LAP-WELDED CHARCOAL IRON BOILER TUBES.

OUTSIDE DIAMETER INCHES	1	1‡	1 ½	13	2	21	21/2	24	3	34	31/2	33	4
PER FOOT	.37 .095 13 90	.35 .095 13 1 15	32 095 13 1 40	.32 095 13 1.66	.30 .095 13 1 91	.32 095 13 2 16	.36. 109 12 2.75	.39 .109 12 3.04	.39 .109 12 3.33	.45 .120 11 3.96	48 120 11 4 28	.55 .120 11 4 60	.60 .134 10 5.47
OUTSIDE DIAMETER INCHES	4 ½	5	6	7	8	9	10	11	12	13	14	15	16
PER FOOT	69 134 10 6 17	.82 .148 9 7.58	1.08 .165 8 10.16	8	.165 8	7		5	229 4½		248 3½	5.87 259 3 40 60	21/2

The above prices are for tubes up to 20 feet long. For tubes in excess of that length, 10 per cent will be added to net

Extra thickness of tubes will be charged as per list of extra gauges.

No deduction for tubes lighter than standard.

#### EXTRA WIRE GAUGE OF BOILER TUBES AWAY FROM STANDARD.

For EXTRA wire gange "Boiler Tubes" away from standard, not exceeding four wire ganges, add one cent for each inch in diameter to the net price per foot for each additional gauge. To calculate price, take discount from 1st prices of regular Tubes and add net charge for extra wire gauge

For 1 number	For 2 numbers.	For 3 numbers	For 4 numbers
2 inch, 2c	2 inch, $4c$ $2\frac{1}{4}$ " $4\frac{1}{2}c$ $2\frac{1}{2}$ " $5c$	2 inch, 6c	2 inch, 8c
2½ " 2½c		2¼ · · · 6¾c	2½ " 9c
2½ " 2½c		2½ · · 7½c	2½ " 10c

Beyond four numbers, price is per pound. Swaging or swelling 2 incb or 2½ inch T bes, 5c per end extra. Cutting screws on Tubes, 80c per hour.

#### STANDARD WELL CASING.

FOR ARTESIAN, SALT, OIL, AND GAS WELLS.



A-258. SCREW AND SOCKET JOINT.



A-259. INSERTED JOINT.

		_								_				
NOMINAL INSIDE DIAMETER INCHI		$\frac{2\frac{1}{4}}{2\frac{1}{2}}$	2½ 2¾	23 3	3 31	$\frac{3\frac{1}{4}}{3\frac{1}{2}}$	3½ 3¾	33 4	4	41 41	4½ 4¼	4 <u>1</u> 5	5 5‡	5 3 5 2
ACTUAL OUTSIDE DIAMETER BELL END OF INCHE	s 2 g	281	253	31	3 7 6	$3\frac{1}{16}$	315	42	478	411	415	51	$5\frac{7}{16}$	54
ACTUAL OUTSIDE OIAMETER OF SOCKET INCHE	s 2 <sub>3</sub> 1	3 1 2	311	3 1 5	37	437	413	412	483	5 3 8	5 3	512	533	6.2
THICKNESS INCHE NOMINAL WEIGHT PER FOOT _ POUNC						.12 4.28	.12 4.60	.134 5.47					.148 8.00	.150 8.40
PRICE PER FOOT	.24	.26	.27	.29	.32	.35	.37	.43	.46	.50	.52	.58	.61	.6
NOMINAL INSIDE DIAMETER _ INCHE		61 65 68	6§ 7	7 <del>1</del> 7 <del>5</del> 7 <del>5</del>	\$ 8	81 85	8§ 9	9§ 10	10 g 11	11å 12	12½ 13	13½ 14	14½ 15	15-
ACTUAL OUTSIDE DIAMETER BELL END OF INCHE	s 61	63	715	737	811	9	9 <del>8</del>	108	118	128				
ACTUAL OUTSIDE CHAMETER OF SOCKET INCHE	s 61 a	7,30	719	8,7	$8\frac{1}{1}\frac{3}{6}$	915	913	1013		12%				
THICKNESS NCHE		11.50						$.191 \\ 21.00$				.25 38.82	$\frac{.25}{42.00}$	.2. 45.
PRICE PER FOOT	.73	.85	.93	1.06	1.22	1.25	1.51	1.80	2.13	2.42	2.95	3.48	4.15	4.

Unless otherwise ordered, Screw and Socket Joint Casing will be sent, and size given in order will be considered as inside diameter required. Special and Heavy Casing with Screw and Socket, or with luserted Joint, can be furnished.



A-260. FLUSH JOINT.



A-261. DRIVE PIPE COUPLING JOINT.

A-260—This Joint is not strong, and should only be used on Heavy Casing. A-261—Threads are made straight and ends of Pipe meet or butt in center of coupling, and will therefore stand heavy driving



SPIRAL RIVETED PIPE.

Diameter,		No. 22	B. W. G.			No. 20	B. W. G.			No. 18	B. W. G.	
Inches.	- Black.	Asphalted.	Onlyanized.	Per 100 Ft. Weight, Lbs.	Black.	Asphalted.	Galvanized	Per 100 Ft. Weight, Lbs.	Black.	Asphalted.	Galvanized.	Per 100 Ft. Weight, Lbs
3	. 24	.27	. 32	130	. 27	.30	. 38	150	.34	. 37	.46	185
1	. 30	.34	. 43	160	. 35	.39	.48	200	. 42	. 46	. 58	245
5	.37	. 42	. 53	500	. 40	.45	.60	250	. 50	. 55	.70	300
6	.40	. 46	. 60	230	. 46	.52	. 68	300	. 57	. 63	.85	360
7	. 45	.52	. 65	260	. 51	.58	.75	325	.63	.70	.90	400
8	. 53	. 61	.75	300	.58	. 66	. 85	360	.73	. 81	1.05	460
9	.60	. 69	.90	340	.66	.75	. 97	410	. 82	. 91	1.18	525
10	. 65	.75	1.00	380	.72	.82	1.05	500	.90	1.00	1.30	575
12	.82	.94	1.25	490	.90	1.02	1.35	600	1.15	1.27	1.65	- 750
14	1.00	1.14	1.45	575	1.10	1.24	1.60	700	1.35	1.49	1.95	900
16					1.30	1.46	1.85	800	1.60	1.70	2.25	1000
18					1.40	1.58	2.05	900	1.75	1.93	2.55	1125
20		1			1.60	1.80	2.30	960	2.00	2.20	2.90	1250
24		1			1.95	2.19	2.85	1150	2.40	2.64	3.35	1460

Dlameter.		No. 16	B. W. <u>G.</u>	1		No. 14	B. W. G.		No. 12 B. W. G.				
Inches.	Black	Asphaited.	Galvanized.	Per 100 Ft. Weight, Lbs.	Black.	Asphalted.	Oalvanized.	Per 100 Ft. Weight, Lbs.	Black.	Asphalted.	Oalvanized.	Per 100 Ft. Weight, Lbs	
5	.50	. 54	70 .85	320 415									
6	.70	.76	1.00	500	.89	. 95	1.15	610	1.25	1.31	1.90	800	
7 8	.80	1.01	1.10 1.28	550 650	1.02	1.09	1.35	700 825	1.40	1.47	2.10	910	
9	1.08	1.17	1.47	750	1.13	1.41	1.70	925	1.70	1.79	2.50	1040 1180	
10	1.15	1.25	1.55	800	1.40	1.50	1.80	1025	1.90	2.00	2.75	1300	
12	1.45	1.57	2.05	1025	1.80	1.92	2.35	1325	2.50	2.62	3.25	1700	
14	2.00	1.84 2.16	2.40	1200 1375	2.10	2.24	2.70 3.15	1560 1790	2.90 3.25	3.04	3.75 4.25	2010 2310	
18	2.20	2.38	3.10	1550	2.75	2.93	3.60	2000	3.60	3.78	4.70	2570	
20 24	2.45 3.00	2.65 3.24	3,40 4,30	1675	3.10	3.30	4.00	2200 2620	4.00	4.20	5.25 6.25	2830 3380	

Manufactured of steel or refined iron. Each length tested to margin of safety. Fittings and Connections to suit service required. For detailed information see special catalogue, sent on application.

Weights given above are approximate per 100 feet for Black Pipe only. Lengths up to 25 feet Black or Asphalted, and to 20 feet Galvanized.



A-265. FLANGED PRESSURE PIPE.

Made of Galvanized Iron and re-galvanized after formation, thereby making all seams and laps perfectly solid.

Each length tested to 150 pounds hydrostatic pressure.

Pipe and Fittings made to specifications and drawings when desired. Where

lengths required are all 5 feet or less, they will be charged as being 5 feet each.

Diameter, Inches.	Price per Foot,	B W. O No.	Approx. Weight per Foot, Lbs.
3	. 50	20	21
4	.70	20	3
5	1.00	20	4
6	1.20	18	5
7	1.40	18	6
8	1.70	18	7
9	2.00	18	8
10	2.60	16	11
12	3.15	16	14
14	4.00	14	20
16	5.15	14	24
18	6.40	14	29
20	7.95	14	34
24	12.00	12	50



B-1. ELBOW.

# STANDARD,



B-2. REDUCING ELBOW.

# ELBOWS, STRAIGHT SIZES.-B-1.

SIZE INCHES	1	3 6	1/2	3	1	11	11	2	2 1	3
PLAIN EACH GALVANIZED EACH PITCHED EACH	.05	.05	.06	.08 .16 .10	.10½ .21 .13	.16 .32 .20	.20 .40 .25	.28 .56 .35	.50 1.00 .65	.75 1.50 1.00
SIZE INCHES	31/2	4	41	5	6	7	8	9	10	12
PLAIN . EACH GALVANIZED . EACH PITCHED . EACH	1.05 2.10 1.30	1.20 2.40 1.50	1.75	2.00 4.00	2.75 5.50	4.70 9.40	6.75 13.50	9.00 18.00	13.50 27.00	20.00 40.00

# ELBOWS, REDUCING SIZES.-B-2.

SIZE INCHE	. 3	- ½	34	1	114	1 ½	2	2 ½	3	31/2
PLAIN EAC GALVANIZED EAC	1 20	.07	.09	.12	.18	.23	.32	.60 1.20	.85 1.70	1.20
SIZE INCHE	4	41/2	5	6	7	8	9	10	12	
PLAIN EAC		2.00 4.00	2.30 4.60	3.15 6.30	5.40 10.80		10.50 21.00	15.50 31.00	23.00 46.00	



B-3. RIGHT AND LEFT ELBOW.



B-4. 45° ELBOW.

#### ELBOWS.-B-3 and B-4.

SIZE INCHES	4	1/2	3	1	11	11/2	2	2 <del>f</del>	3	3 j
R, AND L. PLAIN EACH 45° PLAIN EACH 45° GALVANIZED EACH	.06 .06 .12	.07 .07 .14	.09 .10 .20	.12 .12 .24	.18 .19 .38	.23 .24 .48	.32 .34 .68	.60 .60 1.20	.85 .90 1.80	1.26 1.25
SIZE INCHES	4	4 ½	5	6	7	8	9	10	12	14
R. AND L. PLAIN EACH 45° PLAIN EACH 45° GALVANIZED EACH	1.40 1.45 2.90	2.00 2.20 4.40	2.30 2.50 5.00	3.15 3.45 6.90	5.90 11.80	8.50 17.00	11.25 22.50	17.00 34.00	25.00 50.00	

List of sizes of Cast-Iron Fittings, see pages 253 and 254.

STANDARD.



B-B. TEE.



B-9. REDUCING TEE.

# TEES, STRAIGHT SIZES.-B-8.

SIZE INCHES	ŧ	38	į	3	1	11	11/2	2	21/2	3
EACH	.08	.08	.09	.12	.15	. 23	.29	.41	.73 1.46	1 10 2,20
SIZE . , , , INCHES	31	4	41	5	6	7	8	9	10	12
GALVANIZED EACH	$\frac{1.50}{3.00}$	$\substack{1.75\\3.50}$	2.55 5.10	3.00 6.00	4.00 8.00	6.80 13.60	9.75 19.50	13.00 26.00	19.50 39.00	29.00 58.00

#### TEES, REDUCING SIZES.-B-9.

SIZE INCHES	38	1/2	34	1	11	1 ½	2	21/2	3	31/2
GALVANIZED EACH	.09	.10 .20	.14	.17	.27 .54	.33	.47	.83 1.66	1.25 2.50	1.75 3.50
SIZE INCHES	4	41/2	5	6	7	8	9	10	12	14
GALVANIZED	2.00 4.00	2.95 5.90	$\frac{3.50}{7.00}$	4.60 9.20	7.80 15.60	11.25 22.50	15.00 30.00	22.50 45.00	33.50 67.00	



B-10. ECCENTRIC TEE.



B-11. ECCENTRIC TEE.

#### ECCENTRIC TEES.

These fittings are designed to prevent the accumulation and lodgment of condensation.

Orders must be accompanied with sketch, showing position in which the fitting is to be placed.

Prices on application.



B-15. CROSS.

#### STANDARD.



B-17. Y BRANCH.

#### CROSSES.-B-15.

SIZE INCHES	3	3	1	11	1 ½	2	$2\frac{1}{2}$	3	3 }	4
STRAIGHT SIZES EACH	.16	.22	.27	.42	.53	.75	1.30	2.00	2.70	3.1
STRAIGHT SIZES, GALVANIZED EACH	.32	.44	.54	.84	1.06	1.50	2.60	4.00	5.40	6.3
REDUCING SIZES EACH	. 18	. 25	.30	.46	.60	.83	1.45	2.20	3.00	3.5
REDUCING SIZES, GALVANIZED EACH	. 36	. 50	. 60	. 92	1.20	1.66	2.90	4.40	6.00	7.0
SIZE INCHES	4.6	5	6	7	8	9	10	12	14	
JIZE	- 2	_								
	4.60	5.50	7.25	12.25	17.50	23.50	35.00	52.50		
	-	5.50 11.00	7.25 14.50	12.25 24.50	17.50 35.00	23.50 47.00	35.00 70.00	52.50 105.00		
STRAIGHT SIZES EACH	4.60							0.010		

#### Y BRANCHES.-B-17.

SIZE INCHES	1/2	3	1	11	1 ½	2	21/2	3	31	4	5•	6	7	8	10	12
EACH	. 20	.28	. 34	. 54	.66	.94	1.66	2.50	3.50	4.00	7.00	9.20	15.60	22.50	45.00	67.00
GALVANIZED EACH	.40	.56	.68	1.08	1.32	1.88	3.32	5.00	7.00	8.00	14.00	18.40	31.20	45.00	90.00	134.00
REDUCING EACH	. 23	33	. 40	.62	.76	1.08	1.90	2.90	4.00	4.60	8.00	10.60	18.00	26.00	51.75	77.00



B-19. REDUCER.

REDUCERS.-B-19.



B-20. ECCENTRIC REDUCER.

SIZE INCHES	2 1/2	3	3 }	4	41	5	6	7	8	9	10	12
EACH EACH	$\frac{.60}{1.20}$											15.00 30.00

# ECCENTRIC REDUCERS.-B-20

SIZE	INCHES	2 } x 1 ‡	2½ x 1½	2 ½ x 2	3 x 2	3 x 2½	3½ x 3	3 ½ x 2 ½	4 x 3 ½	4 x 3	5 x 4	6 x 4
EACH		1.50	1.50	1.50	2.40	2.40	3.00	3.00	4.00	4.00	6.00	8.00







B-23. LOCKNUT.



B-24 BUSHING

#### CAPS.-B-22.

SIZE INCHES	2 1	3	3 <del> į</del>	-1	4 1/2	5	6	7	8	9	10	12	14	16
EACH	.40	.54 1.08									5.50 11.00			

# LOCKNUTS.-B-23.

SIZE INCHE	24	3	3 }	4	11/2	5	6	7	8	9	10	12
EACH	. 27	.34	. 47 . 94	1.28	.85 1.70	.90 1.80		1 70 3.40	2.35 4.70		3.00 6.00	

Locknuts smaller than 2½-inch are malleable. See page 61.

#### BUSHINGS.-B-24.

SIZE INCHES	į.	34	1	11	1½	2	2 }	3	$3\frac{1}{2}$	4
EACH	.04	. 05 . 10	.06	.07	.09	.14	21 42	30 60	40 80	.50 1 00
SIZE INCHES	.41/2	5	6	7	8	9	10	12		
EACH	.75 1.50	. 93 1.85	1 25 2.50	1 87 3 75	2 75 5.50	3.25 6 50	3.75 7.50			

Bushings reducing one size only, np to and including 2½ inches, are malleable, and will be found listed on page 61.



B-28. PLUG.



PLUGS.—B-28 and B-29. COUNTERSUNK PLUG.

SIZE INCHES	1	3	1/2	3	1	11	1 }	2	2 ½	3	3 1
EACH, B-2B            GALVANIZED, B-28         EACH           COUNTERSUNK         EACH           LEFT HAND         EACH	.02	.02	02 04 04	03 06 06 06	04 08 08 08	05 10 .09 09	.07 14 11 11	10 .20 15 15	18 36 	25 50	38 76
SIZE INCHES	4	4 ½	5	6	7	8	9	10	12	14	16
EACH, B-2B	42 84	65 1 30	88 1 75	1 20 2 40		2 75 5 50	3 25 6 50	3 75 7 50	5 00 10.00		



B-34. STANDARD FLANGE UNION.



B-37. OFFSET.

#### STANDARD FLANGE UNIONS (With Rubber Gasket) .- B-34.

SIZE	3	1	11	14	2	5 <del>1</del>	3	3 <del>į</del>	4	4 ½
GALVANIZED EACH	46 .92	.52 1.0 <sup>3</sup>	.64 1.28	.78 1.56	1.00 2.00	1.25 2.50	1.50 3.00	1.80 3.60	2.10 4.20	2.70 5.40
SIZE INCHES	5	6	7	8	9	10	12	14	16	
GALVANIZED	3.15 6.30	3.95 7.90	5.50 11.00	7.00 14.00	10.00 20.00	11.50 23.00	16.00 32.00			

#### OFFSETS.-B-37.

SIZE INCHES	3	1	1‡	1 ½	2	2 }	3	31	4	5	6
TO OFFSET 4 INCHES TO OFFSET 6 INCHES TO OFFSET 8 INCHES	.45 .67	.70 1.05 1.40	1.00 1.50 2.00	1.20 1.80 2.40	1.80 2.70 3.60	3.00 4.50 6.00	4.00 6.00 8.00	5.00 7.50 10.00	6.00 9.00 12.00	8,00 12.00 16.00	10.00 15.00 20.00

Galvanized Offsets, Double Plain List.



B-40. SIDE OUTLET ELBOW.



B-41. SIDE OUTLET TEE.

#### SIDE OUTLET ELBOWS.-B-40.

SIZE	1/2	34	1	1‡	1 +	2	21/2	3	3 }	. 4	41/2	5	6
EACH	.18	. 24	. 30	.48	. 60	184	1.50	2.25	3.15	3.60	5.25	6.00	8.25

#### SIDE OUTLET TEES .- B-41.

SIZE	÷	3	1	11	1 ½	2	2 1	3	3 1	4	41/2	5	6.
EACH	. 27	.36	. 45	70	.90	1.25	2.25	3.25	4.50	5.25	7.65	9,00	12.00



B-45. CLOSE PATTERN.

# STANDARD.



B-46. OPEN PATTERN.

# RETURN BENDS, CLOSE PATTERN.-B-45.

SIZE INCHES	÷	3	1	14	11	2	5 <del>j</del>	8
CENTER TO CENTER  EACH  GALVANIZED . EACH RIGHT AND LEFT EACH	1 <del>1</del> 18 . 18 . 36 . 21	1 \\ .20 \\ .40 \\ .23	13 .22 .44 .26	24 .28 .56 .33	.80 .46	31 .57 1.14 .66	3§ 1.20 2.40 1.40	1.70 3,40 1.95

# RETURN BENDS, OPEN PATTERN.-B-46.

SIZE INCHES	3	1	1‡	1 }	2	21/2	3
CENTER TO CENTER EACH GALVANIZED EACH RIGHT AND LEFT EACH	.26 .52	2½ .30 .60 .35	3 .40 .80 .46	3½ .55 1.10 .64	4 .80 1.60 .92	$5\frac{3}{8}$ 1.35 2.70 1.55	6‡ 2.20 4.40 2.50



B-47. BACK OUTLET.



B-48, WIDE PATTERN.

# RETURN BENDS, BACK OUTLET.-B-47.

SIZE INCHES	3	1	1‡	1 ½	2	24	3
CENTER TO CENTER	21 .38 .76 .42	$2\frac{1}{2}$ . 42 . 84 . 48	$\begin{array}{c} 3 \\ .60 \\ 1.20 \\ .70 \end{array}$	$3\frac{1}{2}$ .80 1.60 .95	4 1.15 2.30 1.30	5 ½ 2.00 4.00 2.30	6‡ 3.00 6.00 3.50

#### RETURN BENDS, WIDE PATTERN.-B-48.

SIZE INCHES	1	1	1	1	1	1‡	1‡	1 ½	11	1 ½	2	3	4	4
CENTER TO CENTER RIGHT HAND . EACH GALVANIZED . EACH	3 . 45 . 80	4 .50 .90	5 . 60 1.10	$\begin{array}{c} 6 \\ .75 \\ 1.30 \end{array}$	8 1.00 1.60	$1.00 \\ 1.75$	$\begin{smallmatrix}6\\1.25\\2.00\end{smallmatrix}$	1.30 $2.30$	$\begin{smallmatrix}6\\1.60\\2.60\end{smallmatrix}$	$\frac{8}{2.00}$ $\frac{3.25}{}$	$\frac{4\frac{1}{8}}{1.75}$ $\frac{3.00}{3.00}$	6 2.00 3.25	$\frac{7\frac{1}{2}}{6.50}$ $\frac{10.00}{10.00}$	$\begin{array}{c} 11 \\ 7.50 \\ 11.00 \end{array}$

#### STANDARD.

#### SUITABLE FOR A WORKING PRESSURE OF 15D POUNDS.



B-52. ELBOW.



B-53. DOUBLE BRANCH ELBOW.

# LONG TURN ELBOWS,-B-52 and B-53.

SIZE INCHES	1	1‡	1 ½	2	21/2	3	34	4
ELLS EACH DOUBLE ELLS EACH	32	40	55	80	1 20	2 25	3 25	3.50
	64	80	1 10	1 60	2 40	4 50	6 50	7 00
SIZE INCHES	4-2	5	6	7	8	9	10	12
ELLS	5 50	6 50	8 75	13 00	17 00	25 50	30 00	40.00
	11 00	13 00	17 50	26 00	34 00	51 00	60.00	80 00



B-54. TEE.



B-55. CROSS

# LONG TURN TEES AND CROSSES.-B-54 and B-55.

SIZE	1	11 .	11/2	2	2 1	3	3 ½	4
TEES EACH CROSSES EACH	48	60	82	1 20	1 80	3 40	4 90	5.25
	85	1 10	1 50	2 15	3 20	6 00	8 75	9 50
SIZE INCHES	43	5	6	7	R	9	10	12
TEES EACH CROSSES EACH	8 25	9 75	13 25	19 50	25 50	38.00	45 00	60 00
	15 00	17,50	24 00	35 00	45 00	68.00	80 00	107 00

Reducing sizes can be furnished to order at special prices.

#### STANDARD

SUITABLE FOR A WORKING PRESSURE OF 150 POUNDS.



B-60. FLANGED ELBOW



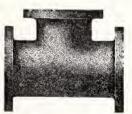
B-61. FLANGED 45° ELBOW.

# ELBOWS.-B-60.

SIZE INCHES	2	2 }	3	31/2	4	$4\frac{1}{2}$	5	6	7	8	9	10	12	14	16	18
DIAMETER DF FLANGES	6	7	71	81	9	9‡	10	11	$12\frac{1}{2}$	$13\frac{1}{2}$	15	16	19	21	$23\frac{1}{2}$	25
WITH FLANGES FACED																108.00
WITH FLANGES FACED AND DRILLED	5.75	6.25	7.00	7.75	9.25	11.00	11.75	14.00	19.75	23.75	30.00	36.00	50.00	65.00	93.00	118.00

#### 45° ELBOWS.-B-61.

SIZE INCHES	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	41/2	5	-6	7	8	9	10	12	14	16	18
DIAMETER OF FLANGES	6	7	$7\frac{1}{2}$	81	9	$9\frac{1}{4}$		11	$12\frac{1}{2}$	13½	15	16	19	21	$23\frac{1}{2}$	25
																108.00
FLANGES FACED AND DRILLED .	6.25	6.75	7.50	8.50	10.00	12.00	12.75	15.00	19.75	23.75	30.00	36.00	50.00	65.00	93.00	118.00



B-62. FLANGED TEE.

# TEES,-B-62

SIZE INCHES	2	21	3	31/2	4	4}	5	6	7	8	9	10	12	14	16	18
DIAMETER OF FLANGES	6	7	7½	81	9	91	10	11	121	13½	15	16	19	21	23 }	25
FLANGES FACED																155.00
FLANGES FACED AND DRILLED	8.50	9.00	10.00	11.25	13.50	16.00	17.25	20.50	28.75	34.75	44.00	52.50	73.00	95.00	135.00	170.00

Flanged fittings will always be furnished faced only, unless otherwise ordered. Extra heavy flanged fittings, see pages 39 to 41.

#### STANDARD.

#### SUITABLE FOR A WORKING PRESSURE OF 150 POUNDS.



B-63. FLANGED REDUCING TEE.



8-64. FLANGED CROSS.

# REDUCING TEES.-B-63.

SIZE INCHES	2	2 1	3	3 1/2	4	$4\frac{1}{2}$	5	6	7	8	9	10	12	14	16	18
WITH FLANGES FACED FLANGES FACED & DRILLED																178.00 193.00

# CROSSES-B-64.

	SIZE INCHES	2	2 }	3	31	4	4½	5	6	7	8	9	10	12	14	16	18
ŀ	DIAMETER OF FLANGES .	6	1 7.	71	8}	9	91			121				19	21	231	25
ľ	WITH FLANGES FACED																216.00
	FLANGES FACED & DRILLED	11.5	012.50	14.00	15.50	18.50	22.00	23.50	28.00	39.50	47.50	60.00	72.00	100.00	130.00	186,00	236.00



B-65. FLANGED Y BRANCH.

# Y BRANCHES.-B-65.

	SIZE INCHES	2	2 1	3	31	4	41	5	6	7	8	9	10	12	14	16	18
	DIAMETER OF FLANGES .	6	7	24	84	9	91	10		121			16	19	21	231	25
ŀ	WITH FLANGES FACED .																216.00
Ŀ	FLANGES FACED & DRILLED	11.50	12.50	14.00	15.50	18.50	22.00	23.50	28.00	39.50	47.50	60.00	72.00	100.00	130.00	186,00	236.00

#### STANDARD.

#### SUITABLE FOR A WORKING PRESSURE OF 150 POUNDS.







#### LONG TURN TEES.-B-69.

SIZE INCHES	5	$2\frac{1}{2}$	3	31/2	4	4 ½	5	6	7	8	9	10	12	14	16	18
DIAMETER OF FLANGES	6	7	7 ±	81	9	91			121						23₺	25
FLANGES FACED																178.00
FLANGES FACED AND DRILLED	9.50	10.00	11.25	12.75	15.00	18.00	19 25	23.00	32.00	39.00	50.00	60.00	83.00	107.00	153.00	193.00

# LONG TURN REDUCING TEES.-B-70.

SIZE INCHES	21	3	31/2	4	4 1/2	5	6	7	8	9	10	12	14	16	18
FLANGES FACED															205.00
FLANGES FACED AND DRILLED	11.25	12.75	14.25	16.75	20.25	21.75	26.00	35.50	44.00	36.50	68.00	94.00	121.00	173.00	220,00

Long Turu Tees with side opening larger than the rnn, special price.

#### LONG TURN DOUBLE TEES,-B-71.

SIZE INCHES	2 ½	3 31	4	44	.5	6	7	8	9	10	12	14	16	18
DIAMETER OF FLANGES	7	71 81	9	91								21		25
FLANGES FACED	8.25 9	9.50   11.00	12.00	15.00	16.25	20.00	26.50	33.50	43.50	53.50	74.00	96,00	140.00	178.00
FLANGES FACED AND DRILLED	10.0011	1.2512.73	5 15,00	18.00	19.25	23.00	32.00	39.00	50.00	60.00	83.00	107.00	153.00	193.00

# LONG TURN DOUBLE TEES, REDUCING.

SIZE INCHES	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	4 ½	5	6	7	8	9	10	12	14	16	18
															205.00
FLANGES FACED AND DRILLED	11.25	12.75	14.25	16.75	20.25	21.75	26.00	35.50	44.00	5 <b>6</b> . <b>5</b> 0	68.00	94.00	121.00	173.00	220.00

List on Long Turu Double Tees, Reducing, is for sizes increasing one or two sizes on the Branch. If Brauch is wanted more than two sizes larger, or reducing on the run, special price will be charged.

STANDARD.



B-75. COMMON FLANGE.



B-76. CURVED FLANGE.

# FLANGES, SMALLER THAN FIVE INCHES.-B-75.

DIAMETER OF FLANGE .	, IN.	4	43	.5	5 ½	- 6	$6\frac{1}{2}$	7	7 <u>1</u>	8	81	9	91	10	11
Size of Pipe Inches															
3 E	ACH	. 22		.30											
1 E	ACH			. 30		. 42									
1	ACH		2.5	. 30		.40									
1½ £	ACH			. 30		. 40									
2 E	ACH					.42	. 50	. 62		. 90					
2 <del>1</del> E	ACH					. 42	.50			. 90					
3 6	ACH						.50	.62	.75	. 90		1.15			
3 <del>1</del> E	ACH									. 90	1.00	1.15		1.50	
4 6	ACH									.90	1.00	1.15		1.50	
41 6	ACH											1.15	1.25	1.50	1.7

# FLANGES, FIVE INCHES AND LARGER.

DIAMETER OF FLANGE	IB.	10	11	12	121	13	131	14	15	16	, 17	18	19	20
Size of Pipe Inches														
5	EACH	1.50	1.75	2.20	2.20									
6	EACH	1.50	1.75	2.20	2.20	2.80	2.80	3.25						
7	EACH			2.20	2.20	2.80	2.80	3.25	4.00					
8	EACH					2.80	2.80	3.25	4.00	5.00				
9	EACH								4.00	5.00	5.75			
10	EACH									5.00	5.75	7.00	7.50	
12	EACH											7.00	7.50	8.5

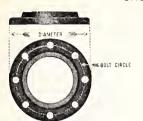
B-76 Curved Flanges made to order at double above prices. Galvanized Flanges at double above prices.



#### ....

# FLOOR FLANGES.-B-77.

SIZE INCHES	3	÷	3	1	1}	11/2	2
DIAMETER OF FLANGE	3	3 }	31	-4	4	4 }	5 }
EACH	. 10	.15	.15	.16	. 1 4	. 22	. 35



STANDARD.



B-79. ECCENTRIC FLANGE.



B-80. BLIND FLANGE.

B-78. FLANGE FACED AND DRILLED.

STANDARD FLANGES. PROPER TEMPLATE FOR DRILLING OUR FLANGED FITTINGS AND PRICE LIST OF FLANGES TO MATCH.

SIZE	INCHES	2	2 1/2	3	31	4	41	5	6	7	8	9	10	12	14	15	16	18	20
DIAMETER FLANGES	INCHES	6	7	74	81	9	91	10	11	121	$13\frac{1}{2}$	15	16	19	21	221	231	25	271
DIAMETER BOLT CIRCLE	INCHES	47	51	6	7	71	73	81	$9\frac{1}{2}$	103	113	131	141	17	183	20	211	233	25
ND. DF BOLT HOLES		4	4	4	4	8	8	8	8	12	12	12	12	16	16	16	20	20	20
SIZE OF BOLTS	INCHES	5	3	5 8	8	1/2	1/2	5	â	5 6	ğ.	3	3	3	3	7 8	J	Į.	급
FLANGES FACED	EACH	1.20	1.40	1.60	1.80	2.15	2.50	2.80	3,20	4.35	5.00	6.75	7.75	10.50	13.75	18.00	22.50	27.50	30,00
FLANGES FACED AND DRILLED	EACH	1.50	2.00	2.25	2.50	3.00	3.35	3.65	4.00	5.75	6.50	8.25	9.25	12.50	16.00	21.00	26.00	31.00	34.00
ECCENTRIC FLANGES FACED	EACH			3.25	3.60	4.30	5.00	5.60	6.40	8.70	10.00	13.00	15.00	18.00	23.00	30.00	37.00	40.00	45.00
AND DRILLED	EACH			4.00	4.30	5.15	5.85	6.50	7.25	10.00	11.50	14.50	16.50	20.50	26.00	33.00	41.00	<b>45.</b> 00	51.00

All the flanges on our Flanged Fittings are drilled in multiples of four, so that fittings may be made to face in any quarter.

Blind Flanges from 2 x 61 to 16 x 24, inclusive, 25 per cent, net higher than above list.



B-84. SQUARE HEAD BOLT.



#### MACHINE BOLTS, WITH SQUARE HEADS AND NUTS.-B-84. PRICES PER HUNDRED.

DIAMETER INCHES	1	15	3	3 E	Ŧ	P and S	3 .	¥.	1
Length in Inches.	1.70	2.00	2.40	2.80	3.60	5.20	7.20	10.00	14.40
2	1.78	2.10	2.52	2.96	3.80	5.50	7.64	10.60	15.20
21	1.86	2.20	2.64	3.12 3.28	4.00	5.80 6.10	8.08 8.52	11.20 11.80	16.00 16.80
31	2.02	2.40	2.88	3.44	4.40	6.40	8.96	12.40	17.60
4	2.10 2.18	2.50 2.60	3.00	3.60	4.60 4.80	6.70 7.00	9.40 9.84	13.00 13.60	18.40 19.20
4½ 5	2.26	2.70	3.24	3.92	5.00	7.30	10.28	14.20	20.00
5½	2.34	2.80	3.36	4.08	5.20	7,60	10.72	14.80	20.80
6 <u>t</u>	2.42	2.90 3.00	3.48	4.24	5.40 5.60	7,90 8,20	11.16 11.60	15.40 16.00	21.60
7	2.58	3.10	3.72	4.56	5.80	8.50	12.04	16.60	23.20
82	2.66 2.74	3.20	3.84	4.72 4.88	6.00	8.80 9.10	12.48 12.92	$\frac{17.20}{17.80}$	24.00 24.80

Bolts with Hexagon Heads or Hexagon Nuts, B-85, 10 per cent. extra. If both Hexagon Heads and Hexagon Nuts, 20 per cent. extra.

#### EXTRA HEAVY.

SUITABLE FOR A WORKING PRESSURE OF 250 LBS. TESTED TO BOO LBS. PRESSURE PER SQUARE INCH.



B-89. ELBOW.



B-90. 45° ELBOW.

#### EXTRA HEAVY FITTINGS. B-89 and B-90.

SIZE INCHES	3	1	11	·1½	2	2 ±	3	3 <u>‡</u>	4	4 ½	5	6	7	8	10	12
ELBOWS, REDUCING . EACH ELBOWS, 45° EACH	.40	. 45 . 45	. 55 . 55	.75 .70	. 95 . 90	$\frac{1.55}{1.50}$	$\frac{2.50}{2.50}$	$\frac{3.40}{3.50}$	4.40 4.50	5.30 5.50	$\substack{6.80\\6.75}$	10.00 9.75	15.00 14.50	17.00 21.00 21.00 4.15	$\begin{array}{c} 35.00 \\ 34.00 \end{array}$	50.00 48.00



B-91. TEE.



B-92. FLANGE UNION.



B-93. CROSS.

# EXTRA HEAVY FITTINGS .- B-91, B-92 and B-93.

SIZE INCHES	1	1	1‡	1+	5	2 ½	3	3 <u>‡</u>	4	41/2	5	6	7	8	10	12
TEES, REDUCING . EACH CROSSES EACH CROSSES REDUCING . EACH	65 65 85 1	.75 1.00 1.25	1.00 1.25 1.60	$\frac{1.25}{1.60}$ $\frac{2.00}{2.00}$	1.60 2.00 2.50	$\frac{2.50}{3.25}$ $\frac{4.00}{4.00}$	4.25 5.50 6.90	$\frac{5.30}{7.50}$ $\frac{9.35}{9.35}$	7.25 10.00 12.50	$8.50 \\ 13.00 \\ 16.25$	11.50 15.00 18.75	15.00 22.00 27.50	23.00 32.00 40.00	$\frac{32.00}{42.00}$	53.00 68.00 85.00	60.00 75.00 98.00 122.00

Our Extra Heavy Fittings are made with a longer radius than the ordinary fittings, thus reducing friction. We do not recommend the use of screwed fittings above 8 inches. For larger sizes flauged are more suitable.

# EXTRA HEAVY CAST-IRON FITTINGS.

SUITABLE FOR A WORKING PRESSURE OF 250 POUNDS.



B-98. FLANGED ELBOW.



8-99. FLANGED 45° ELBOW.

#### ELBOWS.-B-98.

SIZE INCHES	51	3	3 }	+	41	5	6	7	8	9	10	12	14	16	18	20
DIAMETER OF FLANGES	71	9	9	10	101	11	13	14	15	16	174	20	23	25	271	29
WITH FLANGES FACED																135.00
FLANGES FACED & DRILLED	6.25	7.00	7 75	9 25	11 00	11 75	14 00	19 75	23.75	30,00	36.00	50,00	65.00	93.00	118.00	148.00

# 45° ELBOWS -B-99.

SIZE INCHES	2 <u>t</u>	3	3 <u>‡</u>	4	4}	5	6	7	8	9	10	12	14	16	18	20
DIAMETER OF FLANGES	7 -	9	9	10	101	11	13	14	15	16	174	20	23	25	274	29
WITH FLANGES FACED															108.00	
FLANGES FACED & DRILLED .	6.75	7 50	8 50	10.00	12.00	12.75	15 00	19.75	23.75	30 00	36.00	50.00	65.00	93,00	118.00	148.00



B-100. FLANGED TEE.

# TEES.-B-100.

SIZE INCHES	5 <del>į</del>	3	3}	4	41/-	5	6	~	8	9	10	12	14	16	18	20
DIAMETER OF FLANGES WITH FLANGES FACED FLANGES FACED & DRILLED	7½ 7.25	9 8.25	9 9 50	10 10 50	10½ 13 00	11 14 25	13 17 50	23.00	29 00	38 00	17± 46.50	64.00	23 84.00	25 122.00	27½ 155,00	29 195.00
PLANGES PACED & DRILLED .	9 00	10.00	11.35	15.50	16 00	1, 25	20.50	28 75	34.75	41.00	53.50	73.00	25.00	135 - 00	170.00	215.00-

Flanged Fittings will always be furnished faced only, unless otherwise ordered, Template for drilling see page 42.

# EXTRA HEAVY CAST-IRON FITTINGS.

#### SUITABLE FOR A WORKING PRESSURE OF 250 POUNDS.



B-101. FLANGED REDUCING TEE.



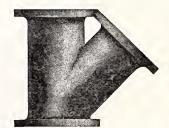
B-102. FLANGED CROSS.

#### REDUCING TEES. B-101.

SIZE INCHES	$2\frac{1}{2}$	3	31	4	4 1/2	5	6	7	8	10	12	14	16	18
DIAMETER OF FLANGES									33.50					$27\frac{1}{2}$ $178.00$ $193.00$

#### CROSSES.-B-102.

SIZE INCHES	5 }	3	31/2	4	41/2	5	6	?	8	10	12	14	16	18	20
DIAMETER OF FLANGES	71	9			101	11			15			23	25	271	29 270,00
															296.00



B-103. FLANGED Y BRANCH.

#### Y BRANCHES.-B-103.

SIZE INCHES	2 1	3	4	5	6	7	8	10	12	14	16	18
DIAMETER OF FLANGES												$27\frac{1}{2}$ $216.00$
WITH FLANGES FACED AND ORILLED	12 50	14.00	18 50	23 50	28 00	39 50	47.50	72.00	100.00	130.00	186.00	236.00

For Standard Flanged Fittings, see pages 33-35. Flanged Fittings will always be furnished faced only, unless otherwise ordered.

# EXTRA HEAVY CAST-IRON FITTINGS.

# SUITABLE FOR A WORKING PRESSURE OF 250 POUNDS.



B-107. FLANGED LONG TURN TEE.



B-108.
FLANGED LONG TURN REDUCING



B-109. FLANGED LONG TURN DOUBLE SWEEP TEE,

#### LONG TURN TEES.-B-107.

SIZE INCHES	$2\frac{1}{2}$	3	31/2	4	41/2	5	6	7	8	10	12	14	16	18	20
DIAMETER OF FLANGES	71	9	9	10	101	11	13	14	15	$17\frac{1}{2}$	20	23	25	$27\frac{1}{2}$	29
WITH FLANGES FACED & DRILLED.															$225.00 \\ 245.00$

#### LONG TURN REDUCING TEES.-B-108.

SIZE INCHES	21/2	3	4	41/2	5	6	7	8	10	12	14	16	18	20
WITH FLANGES FACED														258.00 278.00

#### LONG TURN DOUBLE SWEEP TEES.-B-109.

	SIZE INCHES	$2\frac{1}{2}$	3	4	5	6	7	8	10	12	14	16	18
	DIAMETER DE FLANGES	71	9	10	11	13	14	15	171	20	23	25	271
ı	WITH FLANGES FACED	8.25											178.00
ı	WITH FLANGES FACED AND DRILLED	10.00	11.25	15.00	19.25	23.00	32.00	39.00	60.00	83.00	107.00	153.00	193.00

#### LONG TURN DOUBLE SWEEP TEES, REDUCING.

SIZE INCHES	24	3	4	5	6	7	8	10	12	14	16	18
WITH FLANGES FACED												205.00 220.00

For Standard Flanged Fittings see pages 33 and 35.

Flanged Fittings will be furnished faced only, unless otherwise ordered.

EXTRA HEAVY.

SUITABLE FOR A WORKING PRESSURE OF 250 POUNDS.





B-113. BLIND FLANGE.

EXTRA HEAVY FLANGES.

TEMPLATE FOR DRILLING OUR EXTRA HEAVY FLANGED FITTINGS AND PRICE LIST OF FLANGES TO MATCH.

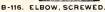
SIZE INCHES	2	21/2	3	31/2	4	41/2	5	6	7	8	9	10	12	14	16	18	20
OIAMETER OF FLANGES INCHES BOLT CIRCLE INCHES	$\frac{6\frac{1}{2}}{5}$	7½ 5¾	9 6}	9 71	10 7 7	10½ 8½	11 9‡	13 10g	14 113	15 13	16 14	$17\frac{1}{2}$ $15\frac{1}{4}$	20 173	23 20‡	25 27g	27± 25	29 26
NO. OF BOLT HOLES	4	4	8 #	8 48	8 8	8	8	8	12 7 4 35	12	12	12	16	16	$\frac{20}{1}$ $22.50$	24	14
FLANGES FACEO EACH FLANGES FACED AND DRILLED EACH	1.20 $1.50$	$\frac{1.40}{2.00}$	$\frac{1.60}{2.25}$	$\frac{1.80}{2.50}$	$\frac{2.15}{3.00}$	3.35	$\frac{2.80}{3.65}$	0.40	R + 10 ()						26.00		

All the flanges on our Flanged Fittings are drilled in multiples of four, so that fittings may be made to face any quarter.

Blind Flanges from 2x6½ to 16x24, inclusive, 25 per cent. net higher than above list. For Machine Bolts see page 37.

#### BASE FITTINGS.







B-117. ELBOW, FLANGED



B-118, TEE, FLANGED.

We make Base Fittings, as shown, for use at the bottom of pipe columns. Can be furnished either with screwe or flanged ends.

Prices on application.

# CAST-IRON FLANGE UNIONS. SPECIAL.





SECTIONAL CUT.

B-121, EXTRA HEAVY UNION.

# FLANGE UNIONS, RECESSED PATTERN.-B-121.

SIZE INCHES	11	1 1	2	21/2	3	34	4	5	6
DIAMETER OF FLANGES	5 5 2.30	6‡ 5 3.20	6½ 5 3.50	73 6 4.40	8 <del>1</del> 6 6,20	8§ 6 7.60	94 8 8,80	10‡ 8 9.90	$     \begin{array}{r}       11\frac{3}{4} \\       8 \\       11.60   \end{array} $



# DROP FORGED UNIONS.-B-122.

SIZE INCHES	1/2	3	1	1‡	1 ½	2	*-2	$2\frac{1}{2}$	3
NUMBER OF BOLTS	2	2	2	2	2	2	3	3	4
SIZE OF BOLTS	78	78	1/2	1/2	1/2	\$ R	1/2	5	3
PRICE EACH	1.00	1.20	1.50	1.80	2.00	<b>2.20</b>	2.50	2.75	3.00

\*Special pattern. In ordering, give number of bolts.

B-122.

#### EXTRA HEAVY MALLEABLE IRON FITTINGS.

MADE FROM STANDARD CAST-IRON FITTING PATTERNS.

SUITABLE FOR A WORKING PRESSURE OF 250 POUNDS.

-	7	1		_	1					1	_	_				
SIZE INCHES	1	8	1	3	1	11	1 ½	2	21	3	31/2	4	41/2	5	6	8
ELBOWS EACH	.20	.25	.30	.35	. 40	. 55	.70	.90	1.50	2.40		4.25		6.50	9.50	
TEES EACH	.30	.40	.45	. 50	. 60	.80	1.05	1.35	2.25	3.60		6.50		9.75	14.25	
FLANGE UNIONS . EACH				1.40	1.60	2.00	2.50	3.00	3.50	4.40	5.25	6.00	7.00	8.00	9.00	18.00

Straight sizes only carried in stock. Reducing sizes made to order.

# EXTRA HEAVY ROUGH BRASS STEAM FITTINGS. MADE FROM

STANDARD CAST-IRON FITTING PATTERNS.

SIZE INCHES	1/2	34	1	1 ‡	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3
ELBOWS EACH ELBOWS, 45° EACH TEES EACH CROSSES EACH RETURN BENDS, CLOSE PATTERN EACH RETURN BENDS, OPEN PATTERN EACH	.36 .36 .65 .90 .70	.70 .70 1.00 1.30 .85 1.00	1.00 1.00 1.35 1.80 1.00 1.75	1.50 1.50 2.00 2.75 2.25 3.00	2.00 2.00 3.00 4.00 2.75 3.75	3.00 3.00 4.50 5.25 4.50 6.00	5.50 5.50 7.50 9.00	8.50 8.50 11.00 14.00

Other Fittings and Redncing sizes made to order at special prices.

# CAST AND DROP FORGED STEEL FITTINGS.

TESTED AT 300 POUNDS AIR PRESSURE.



B-127. STEEL ELBOW.



B-128. STEEL TEE.



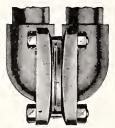
8-129, STEEL CROSS.

#### CAST STEEL FITTINGS.

SIZE INCH	s ĝ	1/2	8	1	13	11/2	2	21	3	31	4	41/2	5	6
ELBOWS, STRAIGHT SIZES . EAR TEES, STRAIGHT SIZES . EAR CROSSES, STRAIGHT SIZES . EAR	н 85		1 10	1 25	1.55	1.95	2.45	3.65	5.10	6.50	7.15	10.20	8 30 12.50 16.65	16.60



B-130. STEEL RETURN BEND.

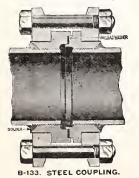


B-131. STEEL RETURN BEND, FLANGED



B-132, SECTIONAL

Return Bends made in 2-inch only; 3½ inches center to center. Screwed, each, \$2.00; Flanged, each, \$3.65. The Bends are intended for Atmospheric Ammonia Condensers.



# STEEL COUPLINGS.

SIZE INCHES	8	1/2	4	1	1‡	11/2	2
ĒACH	85	90	1 15	1 30	1 65	2 15	2.75
SIZE INCHES	2 ½	3	31/2	4	41/2	5	6
EACH	3 75	4.45	5.15	6 65	7.60	7 85	9.15

All Couplings are made of Cast Steel except the 2-inch, which are made Drop Forged Steel, and are intended for direct expansion work to cool rooms, et All are provided with lead gaskets.

Reducing sizes furnished to order.

For Steel Valves see page 92.



B-140, WROUGHT-IRON COUPLING.



B-142. RECESSED COUPLING

# WROUGHT-IRON COUPLINGS.-B-140.

SIZE INCHES	į.	1	3.	- <del>j</del>	å	1	1 1	11/2	2	$2\frac{1}{2}$	3
PLAIN EACH GALVANIZED EACH WEIGHT LBS. PER 100	.05 .06 3	.05 .06 6	.06 .08 9	.07 .10 15	.10 .13 25	.13 .18 37	.17 .25 56	.21 .32 81	.28 .40 125	.40 .55 102	.60 .80 307
SIZE INCHES	3 ½	4	4½	5	6	7	8	9	10	12	14
PLAIN EACH GALVANIZED EACH WEIGHT LBS. EACH	.80 1.05 3‡	1.00 1.40 44	$1.50$ $2.00$ $4\frac{1}{2}$	1.65 2.25 63	2,40 3,25 8‡	$\frac{3.25}{11\frac{1}{2}}$	4.25 15 <sup>3</sup> / <sub>4</sub>	5.50 203	7.50	10.00	13.00

# RECESSED COUPLINGS.-B-142.

SIZE INCHES	1/2	3	1	11	11	2	21/2	3	31/2	4
PLAIN EACH GALVANIZED EACH	.24 .28	.28	.33 .38	. 40 . 50	. 50 . 65	, 65 , 85	.85 1.10	1.30 1.60	1.65 1.95	2.05 2.45

Our Recessed Couplings are made extra heavy and longer than the common couplings.



B-146. SADDLE FOR STEAM PIPE.



B-147. SADDLE FOR CAST WATER PIPE.

# MALLEABLE SADDLES FOR STEAM PIPE.-B-146.

SIZE FOR PIPE INCHES	2	21/2	3	4	5	6	6	8	8	10	10	12	12
TAPPED FOR PIPE INCHES	1 to 1½	1 to 1½	1 to 2	1 to 2	1 to 2	1 to 2	2½ to 4						
	1.00	1,25	1.25	1.50	2.75	2.75	5.75	4.50	6.50	5.50	6.75	6.25	8.75

# MALLEABLE SADDLES FOR CAST-IRON WATER PIPE.-B-147.

NUMBER	1	2	3	4	5	6	7	8	9
FOR CAST PIPE SIZE TAPPED FOR PIPE INCHES EACH	3	3	3	4	4	4	6	6	6
	3 to 1½	2	3	2 to 1½	2	3	1 to 1½	2	3
	1.75	2.00	4.00	1.80	2,15	4.00	2.50	2.70	5,00

# NIPPLES.



B-152. CLOSE NIPPLE.



B-153. SHOULDER NIPPLE.

# TABLE OF SIZES AND LENGTHS KEPT IN STOCK.

		LENGTH	, INCHES			SIZE	PRI	CES			PRICE C	F EXTR.	LONG :	NIPPLES.		
Close	Short.		Lo	ne ne		Inches.	Close or Short	Long.				Inc	hes.			
						Tuenes.	Short	Long.	5	6	î	8	9	10	11	12
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 ½ 1 ½ 1 ½ 1 ½ 2 2 ½ 2 ½ 2 ½ 2 ½ 2 ½ 2	2 2 2 2 2 2 2 2 2 2 2 3 3	2½ 2½ 2½ 2½ 3 3 3½ 3½	3 3 3 3 3 4 4	31/2 31/2 31/2 4 41/2 41/2	1/4 3/4 3/4 1/4 1/4	.03 .03 .04 .05 .06 .09	.05 .05 .05 .06 .07 .09	.06 .06 .07 .08 .11 .14	.06 .06 .06 .08 .09 .12	.07 .07 .07 .09 .10 .14	.08 .08 .08 .10 .11 .15	.08 .08 .08 .10 .12 .16	.09 .09 .09 .11 .13 .18	.10 .10 .10 .12 .14 .19 .25	.10 .10 .10 .13 .15 .20
2 2 2 2 2 2 2 2 3 3	2½ 2½ 3 3 4 4	3 3 3 3 4 4 4 4 4 4 4	31/4 4 5 5	4 4 4 4 5 5 5 5 5	5 5 6 6	1 ½ 2 ½ 3 ½ 4 ¼	.13 .28 .35 .50 .58 .88	.15 .19 .38 .50 .68 .78	.22	.20 .25 .44 .58	.22 .28 .49 .65 .76 .88	.24 .31 .55 .72 .85 .98	.27 .34 .60 .79 .93 1.08 1.63	.29 .36 .65 .85 1.03 1.18 1.78	.31 .39 .70 .93 1.13 1.28 1.93	.34 .42 .75 1.00 1.20 1.38 2.08
3½ 3½ 4 4	4½ 4½ 5 5	5 5	5½ 5½	6 6	61/2	5 6 7 8 9 10	1.05 1.33 1.88 2.25 3.25 4.00 6.00	1.40		2.13	1.50 1.88 2.45 2.93 3.70 4.68 6.75	1.68 2.10 2.75 3.30 4.15 5.35 7.50	1.85 2.33 3.05 3.65 4.60 6.03 8.25	2.03 2.55 3.35 4.00 5.05 6.70 9.00	2.20 2.78 3.65 4.38 5.50 7.38 9.75	2.38 3.00 3.95 4.75 5.95 8.05

# GALVANIZED NIPPLES.

	L	ENGTH,	INCHE	cs		SIZE.	PRI	CES.			PRI	E OF E	XTRA LO	NG NIPP	LES.		
Close	Short.		Lo			Inches.	Close or	Long.					Inches.				
Close	Short.		20	ug.		inches.	Short.	Long.	4	5	6	7	8	9	10	11	12
1 1 de 1	1 1/2 1 1/2 2 2 1/2 2 1/2 2 1/2 2 1/2 2 1/2 2 1/2 2 1/2 2 1/2 1/	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	21-1-2-1-2-2-2-3 3-1-1-2-2-3 3-1-1-2-3-3-1-3-1-3-1-3-1-3-1-3-1-3-1-3-	3 3 3 3 3 1 4 4 4 4 4 4	3 1 3 1 4 4 4 4 4 4 4 4 5 5	1/4/3/8 1/2/4 1 1/4/2 1 1/4/2 2 2/2	.04 .04 .05 .06 .09 .13 .15 .20	.06 .06 .07 .10 .13 .19 24 .31	.08	.09 .09 .10 .12 .16 .21 .26	.10 .10 .12 .13 .18 .24 .30 .40	.11 .11 .13 .15 .21 .27 .34 .45	.12 .12 .14 .16 .23 .30 .38 .50	.13 .13 .16 .18 .25 .33 .42 .55	.14 .14 .17 .20 .28 .37 .46 .61	.16 .16 .19 .21 .30 .40 .50 .66	.17 .17 .20 .23 .32 .43 .54 .71
2½ 2¾ 3 3 3½ 3½	3 4 4 4 4 4 1 1 1 1 2	3½ 4½ 4½ 4½ 5	4 5 5 5 5 5 5 5 5 5 5 5	4½ 5½ 5½ 5½ 6	5 6 6 6 6 6 6	3 3½ 4 4½ 5 6	.50 .73 .80 1.25 1.75 2.00	1.03 1.23 1:80 2.20 2.75			.85	.98 1.18 1.40 2.05 2.38 2.93	1.08 1.33 1.58 2.25 2.68 3.28	1.20 1.48 1.75 2.45 2.98 3.63	1.30 1.63 1.93 2.65 3.28 3.98	1.43 1.78 2.10 2.85 3.58 4 33	1.60 1.93 2.28 3.05 3.88 4.68

#### RIGHT AND LEFT NIPPLES.

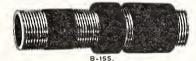
	LENG	TH, INC	HES.		SIZE	PRIC	CES.			PRI	CE OF E	XTRA LO	ONG NIPE	LES.		
												Inches.				
Short		Loi	n pë		Inches	Short.	Long	4	5	6	7	8	9	10	11	12
1.1	2	24	3	31	17	.04	.06	.07	0.07	.08	.09	.10	.11	.11	.12	.13
14	2	21	3	31	38	,04	.06	.07	.07	.08	.09	.10	.11	. 11	.12	.13
11	2	21	3	31	3/2 1	.05	.07	.08	.09	.10.	.10	.11	.12	. 13	. 14	. 15
2	24	3	31	4	3/4	.07	.09		. 10	.11	.12	. 13	. 14	.15	.16	.17
2	21	3	31	4	1	.09	.11		.13	.14	.16	. 17	,19	. 21	. 22	. 24
24	3	34	4	44	114	.12	.16		.17	. 18	. 20	. 22	.24	.26	.28	. 30
21	3	31	4	43	13/2	.14	.19		.21	. 23	. 26	. 28	. 30	. 33	. 35	.38
24	3	31	4	4.1	5	.18	.24		. 26	. 30	.33	.36	. 40	. 43	. 47	, 50
3	31	4	44	5	234	.38	. 50			. 55	.60	. 65	.70	.75	. 80	.85
3	31	4	43	5	3	. 50	. 65			.73	.79	.85	.92	. 98	1.05	1.13
1 4	4 } ]	5	51	ď	3 1	. 65	,85				.93	1.00	1.08	1.15	1.23	1.30
4	4 3	5	5 1	6	4	.75	1.00				1.05	1.15	1.25	1.35	1.45	1.55

# GALVANIZED RIGHT AND LEFT NIPPLES.

SIZE INCHES	1	3.5	1/2	3	1	1‡	1 ½	2	$2\frac{1}{2}$	3	3 į	_4
LONG EACH	. 10	.10	.11	.15	.18	.26	. 31	.39	. 80	1.04	1.36	1.60

Nipples made to order from extra heavy pipe at double regular list.

Assorted close and short Nipples will always be sent unless otherwise ordered.



# LONG SCREWS WITH COUPLING AND LOCKNUT FACED.

SIZE	 _ INCHES	14	38	1/2	<u>a</u>	1	11	1 ½	2	2 1/2	3
STANDARD LENGTH STANDARD LENGTH	 . INCHES	$\frac{2\frac{1}{2}}{.30}$	3 .35	$\frac{3\frac{1}{2}}{.40}$	.55	4½ .75	5 1.00	$\frac{5\frac{1}{2}}{1.30}$	6 1.70	2.70	8 3.70

Long Screws, longer than standard, made to order and charged as cut pipe. Extra for threads, couplings, and locknuts.

Long Screws made to order from extra heavy pipe.

Locknut Nipples made to order and charged as cut pipe, threads extra.

#### STANDARD THREADS FOR WROUGHT-IRON PIPE.

SIZE INCHES	1 9	1/4	3	1/2	2	1	11	1 ½	2	2 ½	3	3 ½
EACH	.05	.05	. 05	.05	.05	.06	.07	.08	.10	.15	.20	. 25
SIZE INCHES	4	41/2	5	6	7	8	9	10	12	14	15	
EACH	.35	. 45	.55	7.70	. 85	1.00	1.25	1.50	2.50	3.50	5.00	

#### LOCKNUT THREADS.

61ZE INCHES	ł	8	1/2	8 4	1	11	1 ½	2	21/2	3
EACH	.10	.10	.10	.10	.12	. 14	.16	. 20	.30	.40

#### BRANCH TEES.



B-159. FOR CIRCULATION.



B-160. FOR CIRCULATION.



B-165, FOR BOX COILS.

# BRANCHES ONE INCH. 2% INCHES CENTER TO CENTER.

NUMBER OF BRANCHES	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
WITH 1 OR 1%-INCH RUN WITH 1%-INCH RUN WITH 2-INCH RUN	1.00	1.15	1.30	1.45	1.75	2.20	2.45	2,90	3.30	4.50		5.50	7.00		8.00 8.25

#### BRANCHES ONE AND ONE-QUARTER INCH. 3 INCHES CENTER TO CENTER.

NUMBER OF BRANCHES	2	3	4	5	6	7	8	9	10	11	12	13
WITH 1¼ OR 1½-INCH RUN WITH 2-INCH RUN	1.30 1.50 1.95	1.90	2.00 2.40 2.85		3.30	3.90	3.60 4.50 4.95	5.25	5.85		5.25 6.50 7.65	6.00 7.00 8.25

#### BRANCHES ONE AND ONE-HALF INCH 34 INCHES CENTER TO CENTER.

NUMBER OF BRANCHES	2	3	4	5	6	7	8	9	10	11	12	13
WITH 115 OR 2-INCH RUN WITH 215-INCH RUN WITH 3-INCH RUN	2.10 2.85 3.15	2.70 3.45 3.80	3.35 4.15 4.60	4.00 5.00 5.50	5.75	6.50	5.85 7.00 7.75	8.25	7.60 9.25 10.00	8.00 9.75 10.75	8.50 10.50 11.50	9.50 11.50 12.75

#### BRANCHES TWO INCH 4% INCHES CENTER TO CENTER.

		-		T .	-							
NUMBER OF BRANCHES	-2	3	4	a	6	7	8	9	10	11	12	13
WITH 2-INCH RUN	4.10	5.25	6.40	7.65	8.80	10.60	11.50	12.25	13.50	14.25	15.00	16.00
WITH 213 OR 3-INCH RUN .				8.50						15.75	16.50	17.50
WITH 315-INCH RUN	5.00	6 25	7.75	9.25	10.75	13.00	14.00	15.00	16.50			}

Back or Side Outlets charged as additional front outlets.

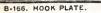
All openings in Branch Tees for Circulation are tapped Right hand.

Branch Tees for Box Coils are always tapped Left hand in branches and Right hand in back inlet.

The run and back opening of Branch Tees are tapped the same size as branches unless otherwise ordered.

# HOOK PLATES.







B-167, SINGLE HOOK PLATE.



B-168. EXPANSION HOOK PLATE.

#### HOOK PLATES.-B-166 and B-167.

NUMBER OF HOOKS	1	2	3	4	5	6	7	8	10	12
FOR 1 IN, PIPE, 2% IN. CENTER TO CENTER FOR 1% IN. PIPE, 3 IN. CENTER TO CENTER FOR 1% IN. PIPE, 3% IN. CENTER TO CENTER	.09 .10 .15 .22	.18 .21 .28 43	.23 .27 .43 .65	.26 .32 .58 90	.32 .41 .72 1.15	.38 .52 .88 1 35	.48 68 1.10	.59 80 1.25	70 1.20 1.55	1 00 1 40 1.90

#### EXPANSION HOOK PLATES.-B-168.

	-									
NUMBER OF HOOKS	1	2	3	4	5	6	7	8	10	12
FOR 1 IN. PIPE, 2% IN. CENTER TO CENTER FOR 1% IN. PIPE, 3 IN. CENTER TO CENTER FOR 1% IN. PIPE, 3% IN. CENTER TO CENTER	.15 .17 .25	.25 .27 .40	35 40 60	50 60 75	60 .70 90	.70 .80 1.00	.80	95 1.15	1 35 1.50	1 70 2.00

B-169, BEAM HOOK.

#### BEAM HOOKS,-B-169.

SIZE INCHES	1/2	3	1	11	11/2	2	2 <del>1</del> /2	3
EACH	.13	15	. 18	.22	.24	.35	. 65	.90



# PIPE HANGERS.-B-171. MALLEABLE IRON, GALVANIZED.

SIZE INCHES	å	1/2	3	1	1‡	11/2	2
EACH	.07	.07	07	08	09	.12	16

**CCCCC** 

8-178, GAS HOOKS.



B-177. TINNED STRAPS.

# GAS HOOKS.-B-176.

SIZE INCHES	1	ę	1/2	3	1	1 ‡	1 ½	2
PER 100	.45	. 55	65	.80	1 00	1 30	1 60	2 00

#### TINNED STRAPS.-B-177.

п		
п	THURSD OFFICE	
Ľ	TINNED STRAPS PER POUND	. 15
в		



# EXPANSION PIPE HANGERS, OR RING HOOKS.-B-181.

SIZE INCHES	3	1	1‡	$1\frac{1}{2}$	2	21	3	3 ₺	4	4 ½	5	6	7	8
COMPLETE EACH	17	.18	. 19	25	. 29	. 36	. 44	.55	. 63	.90	1.12	1.35	1.80	2.2
SIZE OF PIPE, RINGS AND BUT-	å	충	å	흥	ğ	1/2	1/2	1/2	$\frac{1}{2}$	1/2	$\frac{1}{2}$	1/2	1/2	1/2

# PARTS OF EXPANSION PIPE HANGERS.

SIZE	INCHES	3	1	11	11/2	2	2 ½	3	3 ½	4	4 ½	5	6	7	8
PLATES	EACH	.08 .06 .08	.08 .06 .12	.08	.09 07 .20	.09 .07 .25	.10	.10 .08 .40	.10 .08 .50	.10 .08 .60	.10 .08 .80	.10 .08 1.00	.10 .08 1.25	.10 .08 1.70	.10











ADUISTABLE CIDE HANGED IN 100

# ADJUSTABLE PIPE HANGER,-B-183. MALLEABLE IRON.

SIZE INCHES	1/2	3	1	11/4	1 }	2	2년	3	3 }	4	5	6
EACH	.15	.18	.18	.20	. 25	.28	. 33	.38	. 45	. 55	. 65	.75

# EUREKA PATENT ADJUSTABLE PIPE MANGER.-B-185. THREADS IN NUTS STANDARD PIPE THREAD.

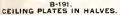
SIZE INCHES	1	3	1	11	1 ½	5	21	3	$3\frac{1}{2}$	4	5	6	7	8
MALLEABLE IRON EACH	.15	.18	.18	. 20	.25	.28	33	.38	. 45	. 55	. 65	.75	1.15	1.25

# CAST-IRON CLAMPS FOR GIRDERS.-AS SHOWN IN B-186.

SIZE INCHES	3	3 1	4	4 ½	5	6
EACH	. 40	. 40	. 60	.60	. 60	. 60

See pages 148 to 153 for Steam and Water Heating Specialties.







B-192. CEILING PLATES IN ONE PIECE.



B-193. FLOOR PLATES.

# CAST-IRON CEILING PLATES IN HALVES.-B-191.

SIZE INCHES	3	1	1‡	11/2	2	21/2	3	31/2	4
EACH	.16	.18	.20	.25	.30	.35	. 50	.60	.70

# CAST-IRON CEILING PLATES IN ONE PIECE.-B-192.

SIZE INCHES	3	1	11/4	1 ½	2	21/2	3	$3\frac{1}{2}$	4
EACH	.13	.16	.18	.23	. 27	.36	.50	.55	.68

#### CAST-IRON FLOOR PLATES .- B-193.

SIZE INCHES	1/2	3	1	13	11/2	2	$2\frac{1}{2}$	3
EACH	.06	.06	.08	.11	.14	.16	.24	.30

This Floor Plate is made with grooves on the under side of the flange, as shown in cut. in order that it may be easily parted by a slight blow when required to be used in halves.



B-195. OPEN.



B-195. CLOSED.

# COLD ROLLED STEEL FLOOR AND CEILING PLATES .- B-195.

SIZE INCHES	ł	3	1	11	11/2	2
POLISHED STEEL	.12	.12	.15	.18	. 20	.24



B-200.

# EXCELSIOR STEAM PIPE INSULATOR.-B-200.

SIZE	INCHES	3	1	1‡	11/2	2	$2\frac{1}{2}$	3	3 ½	4
EACH .		. 60	.70	.80	1.00	1.20	1.40	1.65	1.85	2.15

Standard sizes are adjustable from 12 inches to 24 inches. Special lengths made to order. See pages 148 to 153 for Steam and Water Heating Specialties.



B-202. ADJUSTABLE CEILING PLATE.



B-203. ADJUSTABLE FLOOR PLATE.

# CAST-IRON ADJUSTABLE FLOOR AND CEILING PLATES.-B-202 and B-203.

SIZE INCHES	ž	3	1	1‡	1½	2	21	3	31	4	5	6
PLAIN EACH NICKEL PLATED EACH	.09 .25	.09	.12	.14 .32	.16 .35	.20 .38	.35 .52	.60 .75	.90 1.10	1.25 1.50	1.60 2.00	2.00 2.50

The Nickel Plated Plates are packed one dozen in a box.



B-206. CLOSED.



B-206. OPEN.

#### PATENT ADJUSTABLE FLOOR AND CEILING PLATES.-B-206.

SIZE INCHES	8 8	1/2	3	1	1‡	1 ½	2	2 <u>1</u>	3
BRASS, NICKEL PLATED EACH	.25	.25	.25	.28	.32	35	38	.52	75



B-209. BRASS FLOOR OR CEILING PLATE.



B-210. IMPROVED BRASS FLOOR PLATE.

#### STAMPED FLOOR OR CEILING PLATES .- B-209.

SIZE INCHES	1	1	11	1 ½	3
NICKEL PLATED PER 100	10.00	11.00	12.00	13.00	15.00

# IMPROVED BRASS FLOOR PLATE.- B-210.

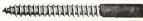
SIZE INCHES	1	1	11	1½	2
NICKEL PLATED PER 100	12.00	14.00	15.00	16.00	18.00



B-215. LAG SCREW.



LIST ADOPTED JAN. 30, 1895.



B-217. LAG SCREW END.

# LAG SCREWS WITH SQUARE HEADS.-B-215. PRICES PER HUNDRED.

DIAMETER	ŧ	78	1/2	To & &	3	7	1
Length in Inches.	3.06	3.63	4.35	5.40	7.92		
3	3.24	3.87 4.11	4.65 4.95	5.85	8.58 9.24	12.30 13.20	18.60
4 5	3.60 3.96	4.35 4.83	5.25 5.85	6.75	9.90 11.22	14.10 15.90	19.80 22.20
6	4.32	5.31 5.79	6.45	8.55 9.45	12.54 13.86	17.70 19.50	24.60 27.00
8		6.27	7.65	10.35	15.18	21.30	29.40
9 10		6.75	8.25 8.85	11.25 12.15	16.50 17.82	23.10 24.90	31.80 34.20
12			10.05	13.95	20.46	28.50	39.00

Lag Screw Hooks, B-216, 25 per cent. extra. Lag Screw Ends, B-217, 25 per cent extra.

#### THE PERFECT EXPANSION CASE BOLT.-B-219.



DIAMETER .		+	å	1/2	5	3 4	7 8	1
Length, Inche	9,							
11/2	EACH	. 10						
2	EACH	.10						
21	EACH	.10						
3	EACH	. 10		1				
3 <del>Ĭ</del>	EACH	. 10	. 15					
4	EACH	. 10	.15	. 20	.26	. 35		
41	EACH	.10	.15	, 20	.28	.35	.45	
5	EACH	.10	.15	. 20	.28	.36	.45	. 55
5 <del>1</del>	EACH		.15	. 20	.28	. 37	. 45	,55
6	EACH		.15	.20	.28	. 37	.46	.58
61/2	EACH.		. 15	.20	.28	.38	.46	. 58
7	EACH		.16	.22	.30	.38	.48	. 58
7.5	EACH		.16	. 22	.30	.40	.48	.58
8	EACH		.16	.22	. 30	. 40	.48	. 60
H	EACH			.22	. 30	.40	. 50	. 60
10	EACH !			.24	. 32	, 40	. 50	. 65
11	EACH			.24	.32	.42	. 55	. 65
12	EACH			. 24	. 32	.42	.55	. 65
LENGTH OF CASI	E	1 ½	3	33	4	4	41/2	5
DIAMETER OF CA	ISE	1/2	3	1 5	1,1,	1,3	1,6	11/2

#### CASE AND NUT WITHOUT BOLT.

SIZE BOLT FOR CASE INCHES	ł	ŝ	j.	ž,	i i	ž	1
CASE AND NUT EACH	.08	.11	.17	. 22	. 29	. 33	. 40

#### SCREWED FOR IRON PIPE.

The necessity for better and safer House Drainage has induced Sanitary Engineers to recommend and adopt Wroug Iron Screwed-Jointed Pipes in place of the ordinary Cast-Iron Lead-Jointed Soil Pipes, preventing thereby accumulat of Sewer Gas in houses, caused by leaky lead joints.

We manufacture Drainage Fittings which are specially adapted to the new system of House Drainage.

These Fittings have an interior shoulder, and are made with same inside capacity as the inside diameter of the Pipe, it securing an unobstructive interior surface, allowing all solid matters to pass without choking up the Pipes.

The Fittings are coated with heated Asphaltum.



B-225, LONG TURN ELBOW,



B-226. ELBOW.



B-227. LONG TURN ELBOW, 45°.



B-228. ELBOW, 60%

#### LONG AND SHORT TURN ELBOWS.

SIZEINCHES	1‡	1 }	2	$2\frac{1}{2}$	3	4	5	6	7	8	10
LONG TURN ELBOWS EACH		.60	.70	1.10	1.30	2.00	3.60	5.20	8.50	10.00	12.00
SHORT TURN ELBOWS EACH	.45	.50	. 60	.90	1.10	1.70	2.60	3.50	6.00	7.00	9.00
LONG TURN ELBOWS, 45°, 1/6-BEHD EACH				122	1.45	2.25	4.00	5.75	9.50	11.00	13.50
SHORT TURN ELBOWS, 60°, %-BEHD . EACH		.50	. 60		1.10	1.70	2.60	3.50	6.00	7.00	9.00



B-229. 45° BEND.



B-230. 22 1-2° BEND.



B-231. 11 1-4° BEND.



B-232. 5 5-8° BEND.

# SHORT TURN BENDS. -B-229-230-231-232.

SIZE INCHES	11	1 ½	2	21/2	3	4	5	6	7	8	10
EACH	.45	, 50	.60	. 90	1.10	1.70	2.60	3.50	6.00	7.00	9.00

Sizes differing from above can be furnished, but will be charged extra. Galvanized Drainage Fittings double above list







B-235, 45° REDUCING Y.





# Y BRANCHES: STRAIGHT SIZES.

SIZE INCHES	1 ½	5	5 j	3	1	5	6	7	8	10
B-234, 450 Y BRANCHES EACH	.80	1.00	1.50	1.70	2.60	3.50	5.50	12.00	15.00	21.00
B-236, 450 DOUBLE Y BRANCHES EACH	1.00	1.30	1.75	2.20	3.10	4.25	6.50	15.00	18.00	25.00

#### REDUCING Y BRANCHES.

Ī	SIZE		INCHES	2x1}	$2\frac{1}{2} \times 1\frac{1}{2}$	2½x2	3x14	3x2	4x1½	4x2	4x3	5x2	5x3	5 x 4	6x2	6x3	6x4	6x5	8x4	8x6
	B-235																			15.00
	B-236		EACH	1.30	1.75			2.20		3.10		4.25			6.50		~	* 00	15 00	15.00
L	B-237		EACH	1.00				1.70		2 60	2.60	4.50	4.00	4.50	7.00		7.00	7.00	13.00	15.00



B-239. 3-WAY ELBOW.



B-240. Y BRANCH, T PATTERN.



B-241. CROSS.

# ELBOWS AND CROSSES.-B-239 and B-241.

SIZE INCHES	1 1/2	2	3	3x2	4	4x2	5	5x4	6	6x5
3-WAY ELBOWS EACH CROSSES EACH	1.25	1.30 1.50	2.20 3.00	3.00	3.10 4.00	4.00	4.25 6.50	6.50	6.50 8.50	8.50

# Y BRANCHES, T PATTERN, 90°.-B-240.

SIZE . INCHES	1	11/2	1½x1¼	2	2x1½	$2\frac{1}{2}$	$2\tfrac{1}{2}x1\tfrac{1}{2}$	2½x2	3	3x1½	3x2	4	4x1½	4x2	4 x 2 ½
EACH	.90	1.15	1.15	1.35	1.35	1.90	1.90	1.90	2.25	2.25	2.25	3.50	3.50	3.50	3,50
SIZE . INCHES	4x3	3x4	5	5x1½	5 x 2	5x3	5x4	6	6x2	6x3	6x4	6x5	7	8	10
EACH	3.50	3.50	5.50	5.50	5.50	5.50	5.50	7.00	7.00	7.00	7.00	7,00	11.50	14.50	20.00

Sizes differing from above can be furnished, but will be charged extra. Galvanized Drainage Fittings double above list.



B-243. CLOSET TEE.



B-244. PLAIN TEE



B-245. CLOSET TEE.

#### CLOSET TEES .- B-243.

SIZE INCHES	3	4	5 x 4	6 x 4
WITH 2-INCH RIGHT-HAND INLET ON SIDE AND 2-INCH TOP INLET, EACH WITH 2-INCH LEFT-HAND INLET ON SIDE AND 2-INCH TOP INLET. EACH WITH 2-INCH INLETS ON BOTH SIDES AND 2-INCH TOP INLET. EACH WITH 2-INCH RIGHT-HAND INLET ON SIDE	3.00	5.50 5.50 6.00 3.50 3.50	7.00 7.00 7.50 6.50 6.50	9.00 9.00 10.00 8.00 8.00

#### PLAIN TEES.-B-244.

SIZE INCHES	11/2	2	2 x 1 ½	3	3 x 2	4	4 x 2	4 x 3	. 5	5 x 2	5 x 3	6	6 x 4	7	8	10
EACH	.75	.90	.90	1.40	1.40	2.30	2.30	2.30	4.00	4.00	4.00	6.00	6.00	9.00	12.00	18.00

#### CLOSET TEES.-B-245.

SIZE	INCHES	3	4	5 x 4	6 x 4
WITH 2-INCH INLETS ON BOTH SIDES	EACH	3.50	4.00	7.00	10.00



B-247. CLOSET ELBOW, WITH FLANGE.



CLOSET ELBOW.



LOSET FLANGE,



CLOSET FLANGE,

# CLOSET ELBOWS AND FLANGES.

SIZE INCHES	4	4 x 5	5
B-247, WITH FLANGE 10 INCHES IN DIAMETER	2.50	::::	
B-249. IRON FLANGE, 10 INCHES IN DIAMETER		3.70	1.30
B-250. BRASS FLANGE 7% INCHES IN DIAMETER			3.20

Sizes differing from above can be furnished, but will be charged extra. Galvanized Drainage Fittings double above list.



B-252. REDUCER.



B-253. AIR INLET CAP.



B-254. ROOF CONNECTION.



B-255. BRASS NIPPLE.

#### REDUCERS.-B-252.

SIZE INCHES	3 x 2	4 x 2	4 x 3	5 x 2	5 x 3	5 x 4	6 x 4	6 x 5	8 x 6
EACH	1.00	1.50	1.50	2.00	2.00	2.00	3.00	3.00	5.00

# B-253, B-254, and B-255.

SIZE INCHES	1	11	11/2	2	3	4	5	6
B-253, FOR CAPPING AIR INLET PIPES. EACH B-254, ROOF CONNECTIONS EACH B-255, BRASS SOLDERING NIPPLES. EACH	.40	.63	.84	.50 1.17	1.30 ,80 2.34	1.50 1.00 4.00	2.00 1.20	2.00



B-257. S TRAP.



B-258. RUNNING TRAP.

# TRAPS.-B-257 and B-258.

SIZE INCHES,	2	3	4	5	6	8
S TRAPS EACH HALF S TRAPS EACH RUNNING TRAPS	3.50 2.25 2.40	4.00 3.00 8.50	6.50 4.50 5.00	10.00 7.50 8.00	20.00 14.00 15.00	22.00 25.00

Sizes differing from above can be furnished, but will be charged extra. Galvanized Drainage Fittings double above list.

# MALLEABLE IRON FITTINGS.



B-270. GAS ELBOW.



B-271. BEADED ELBOW. ELBOWS.-B-270 and B-271.



B-272. 45° ELBOW.

SIZE	18	1	<del>2</del>	1/2	3	1	1‡	11/2	2	21/2	3	3‡	4
PLAIN EACH	.04	.04	.06	.10 .14	.15 .20	.22	.25 .40	.35 .60	.50			2.25 3.75	

# ELBOWS, 45°.-B-272.

SIZE IHCHES	#	1/2	3	1	1‡	11/2	2	21/2
PLAIN EACH	.10 .15	.12	.18	. 26 . 40	.36 .50	.54 .85	.82 1.35	1.25 2.00



B-277. STREET ELBOW.



B-279. SIDE OUTLET ELBOW. STREET ELBOWS.-B-277.



B-280. DROP ELBOW.

SIZE INCHES	ŝ	1/2	34	1	11	11/2	2
PLAIN EACH GALVANIZED EACH		.12 .15	.20 .28	.25 .35	.40 .55	.55 .80	.90 1.30

# SIDE OUTLET ELBOWS .- B-279.

SIZE	8	1	ž	1	11	11/2
EACH	.08	.10	.18	.30	.45	.60

#### DROP ELBOWS.-B-280.

SIZE	1	8	1/2	3	1
PLAIN EACH	.06	.08	.12	.20 .35	. 25 . 40

For Weights and Classifications of Malleable Fittings, see page 65.

# MALLEABLE IRON FITTINGS.



B+282. DROP ELBOW, FLANGE RIGHT.



B-283. DROP ELBOW, FLANGE LEFT.



B-284. LONG DROP ELBOW.

DROP ELBOWS.-B-282, B-283, and B-284.

	SIZE INCHES	1 1 X 8	3 x 3
ı	8-282 AND 8-283. RIGHT OR LEFT DROP ELBOWS EACH	.08	.08
ŀ	B-284. LONG DROP ELBOWS EACH 8-284. LONG DROP ELBOWS, GALVANIZED	.10	.10
ı	0-284. CONG DAOF ELBOWS, GALVANIZED	1.10	



B-287. GAS TEE.



B-288, BEADED TEE.

TEES.-B-287 and B-288.

SIZE INCHES	18	ŧ	8 8	1/2	3	1	11/4	11/2	2	21/2	3	31/2	4
PLAIN EACH GALVANIZED EACH	07			.11	.15 .	.25 .38		.45 .70					3.40 5:75



B-292. FOUR-WAY TEE.



B-294. CROSS-OVER FITTING.



B-298. DROP TEE.

FOUR-WAY AND DROP TEES AND CROSS-OVER FITTINGS.

SIZE INCHES	14	i	1/2	34	1	11	11/2
FOUR-WAY TEES, PLAIN EACH DROP TEES, PLAIN EACH DROP TEES, GALVANIZED EACH LONG DROP TEES EACH CROSS-OVER FITTINGS, GALVANIZED EACH	.08	.12 .10 .15 .12	.14 .14 .25	.20 .22 .40	.35 .30 .55	.50	.80

# MALLEABLE IRON FITTINGS.



B-301. GAS CROSS.



B-302. BEADED CROSS.

#### CROSSES .- B-301 and B-302.

SIZE INCHES	1	å	1/2	å	1	1 ‡	1 ½	2	2 1	3	31/2	4
PLAIN EACH	.08	.10	.12 .17	.20 .25	.30	.40					3.25 5.00	



B-308. REDUCER.



B-309. RIGHT AND LEFT COUPLING.



B-310. CAP.

#### REDUCERS.-B-308.

SIZE INCHES	1	8	1/2	3	1	11	1½	2	21	3	31/2	4
PLAIN EACH GALVANIZED EACH	.03	.03	.05	.10	.16 .25	.20 .35	.28 .45	.45 .75	.70 1.05	1.00 1.65	1.50 2.40	1.85 3.05

#### RIGHT AND LEFT COUPLINGS .- B-309.

SIZE INCHES	ł	38	1/2	ą	1	11	1½	2
PLAIN EACH GALVANIZED EACH	.04	.05	.08	.12	.16 .25	.25	.36 .55	.52 _75

#### CAPS .- B-310.

SIZE INCHES	1	8	1/2	3 4	1	11	11/2	2	$2\frac{1}{2}$	3	31/2	4
PLAIN EACH GALVANIZEO EACH	1	.04	.05	.08 .12	.12	.16	.24 .38	.32 .52	.45 .76	,85 1,30	1.00 2.25	1.20 3.00

For Weights and Classifications of Malleable Fittings, see page 65.

## MALLEABLE IRON FITTINGS.







B-316. FACED BUSHING.



B-317, LOCKNUT.



SIZE INCHES	1	325	1/2	1	1	11/4	1½	2	2 ½	3
BUSHINGS, PLAIN EACH BUSHINGS, GALVANIZED EACH FACED BUSHINGS, PLAIN EACH LOCKNUTS, PLAIN EACH LOCKNUTS, GALVANIZED EACH EXTENSION PIECES EACH	.02	.04 .08 .03 .04	.04 .08 .04 .05	.05 .10 .11 .05 .07	.06 .12 .13 .07	.07 .14 .17 .09 .14	.09 .18 .22 :11 .20	.14 .28 .32 .18 .30	.21 .42 .48 .40 .55	.50



B-320. HEXAGON NIPPLE.



B-321. OFFSET COUPLING.



B-322, WASTE NUT.



SIZE INCHES	4	1	114	1½	2
EACH		.30	.40	.50	.70

HEXAGON NIPPLES .- B-320.

#### OFFSET REDUCING COUPLINGS .- B-321.

SIZE INCHES	1 x 3	1} x 1	1½ x 1¼	2 x 1½	2 ½ x 2	3 x 2 ½	3½ x 3	4 x 3	5 x 4
EACH	60	.70	.90	1.10	1.80	2.50	3.00	4.00	6.00

WASTE	NUT	sB	-322.		
SIZE INCHES	1	3 8	1/2	3	1
PLAIN EACH GALVANIZED EACH	.04	.05	.06	.08	.10

## WALL PLATES.-B-323.

SIZE								 		 	INC	IES	å	
EACH	-	÷	-		-	-	-		-		-		.12	



B-326, LOOP.



B-327. HOOK, MALE.



B-32B. HOOK, FEMALE.

CHANDELIER	LOOPS	AND	HOOKS.

SIZE	1/2
B-326. CHANDELIER LOOPS	.12 .12



## MALLEABLE RETURN BENDS.



B-332. CLOSE PATTERN.

RETURN BENDS, CLOSE PATTERN.-B-332.

B-333. OPEN PATTERN.

SIZE INCHES	1/2	3 4	1	1‡	1½	2
CENTER TO CENTER RIGHT HAND, PAIN . EACH RIGHT AND LEFT, PLAIN . EACH RIGHT HAND, GALVANIZED . EACH	1	1¼	1½	13	2136	2§
	. 13	,25	.35	.50	.75	1.00
	. 15	,30	.45	.60	.90	1.25
	. 25	,35	.55	.75	1.15	1.65

## RETURN BENDS, OPEN PATTERN.-B-333.

SIZE INCNES	1/2	3 4	1	1‡	1½	2	$2\frac{1}{2}$	3
CENTER TO CENTER RIGHT HAND, PLAIN EACH RIGHT AND LEFT, PLAIN EACN RIGHT HAND, GALVANIZED EACN	1½ .15 .20 .25	2 ,30 ,38 ,45	2½ .50 .60 .70	3 .65 .80 .90	3½ .85 1.05 1.25	4 1.25 1.55 2.00	$\begin{array}{c} 4\frac{1}{2} \\ 2.00 \\ 2.50 \\ 3.50 \end{array}$	5 3.00 3.75 5.00



B-33B, RETURN BEND.



B-339. QUARTER BEND.



B-340, GOOSE NECK.

# WROUGHT-IRON RETURN BENDS.-B-338. MADE FROM EXTRA HEAVY PIPE

SIZE INCNES	1	14	1½	2
LEAST DISTANCE BETWEEN CENTERS PIPE CAN BE BENT INCHES LEAST LENGTH CENTER TO END RETURN BENDS CAN BE MADE INCHES	4 5	6	8	8

#### WROUGHT-IRON QUARTER BENDS.-B-339.

SIZE	1	11	1 ½	2
LEAST RADIUS THE PIPE CAN BE BENT	2 5	3 6	4 8	8

#### WROUGHT-IRON GOOSE NECKS.-B-340.

SIZE INCHES	å	1	ΙĮ
LEAST DISTANCE BETWEEN CENTERS PIPE CAN BE BENT INCRES LEAST LENGTH CENTER TO END GOOSE NECKS CAN BE MADE	3½	4	6
	5	5	6

The dimensions of Wrought-iron Bends vary so that we are unable to make a list price. Upon receipt of dimensions and quantity wanted we will be pleased to quote prices.

#### MALLEABLE IRON FITTINGS.







B-346. DOUBLE Y.

Y BENDS.-B-345 and B-346.

SIZE INCHES	1/2	3	1	1}	11	2	5 }	3
Y BEND, PLAIN EACH Y BEND, GALVANIZED . EACH DOUBLE Y BEND, PLAIN . EACH DOUBLE Y BEND, GALVANIZED . EACH	.25 38	.60 	60 90 90 1 35	80 1.25 1.25 1.90	1.00 1.50 1.50 2,25	1.70 2 50 2.50 3.75	2 00 3.00 3 00 4.50	3 00 4 50 5 00 7 50



B-35D. ELBOW No. 1.



B-351. SOCKET No. 2.



B-352. UNION ELBOW No. 3.



UNION SOCKET No. 4.

## CIRCULATING BOILER COUPLINGS, ALL ONE-INCH MALE THREAD.

NUMBER	1	1.1	1 B	2	$2\Lambda$	2B	3	3A	3B	4	4.A	4B
SIZE FEMALE TAP SIZE OUTLET	$\frac{\frac{1}{2}}{\frac{1}{2}}$ . 15	1 3 .15	4 4 .15	15	15	\$ 4 15	1 1 2 40	1 2 3 4 45	1 1 15	1 1 2 1 40	12 34 45	3 4 45

All Number B Fittings tapped Blank, i. c., not threaded inside. Always specify if wanted with or without Union.

A set comprises | With Union—One 3A, two 3B, one 4B.

Without Union—One 1A, two 1B, one 2B.



MORAN FLEXIBLE

## MORAN FLEXIBLE UNION JOINTS.

#### FOR STEAM OR LIQUID.

SIZE INCHES	375	1/2	34	1	11	1 ½	2	21	3	4	5	6
PRICE EACH	3.00	3.25	3,75	4.25	5.25	6.00	7.50	9.00	11.25	15.00	18.75	25.00

Constructed with three parts. No packing or springs.

For laying pipe lines across streams or bodies of water, this Joint is without a rival, as the pipe line may be laid on a ft or barge and lowered to the bed of the stream, where it will readily conform to all the irregularities at the bottom, and main absolutely gas or liquid tight. It is being used quite extensively for pumping oil long distances over irregular round and across waterways.

Railroad Work-For steam, air and water connections, between engine and tender, all metal.

Temporary Steam Lines—Pumping service in mines, all kinds of connections on tow-boats. In fact, the Moran Joint applicable to all classes of machinery needing a flexible conveyor of gas, steam, air or liquid, and because of its compact matruction can be applied on the inside of boilers, pipes, etc.

## MALLEABLE IRON FITTINGS.











B-366, SECTIONAL KEYSTONE UNIC

MALLEABLE UNIONSB-365.												
SIZE INCHES	1	3 8	1/2	3	1	11	1 ½	2	$2\frac{1}{2}$	3	31	4
PLAIN EACH GALVANIZED EACH	.18 .27	.20	. 22	.27	.33	.46 .70	.58 .90		1.55 2.35			4.3

KEYSTONE UNIONSB-366.										
SIZE INCHES	4	3 8	1/2	3	1	11	1 ½	2	21/2	3
PLAIN EACH GALVANIZED	.20 .24	.24	.28 .35	.35 .46	.40 .55	.56 .78	.80 1.12	.95 1.35	2.00	2.78



B-370. FEMALE UNION ELBOW.



B-371. MALE UNION ELBOW.

## UNION ELBOWS.-B-370 and B-371.

SIZE INCHES	÷	3	1	1‡	11/2	2	2 ½
FEMALE, PLAIN	.42 .48	.54 .62	.63	.90 1.05	1.05 1.20	1.55 1.80	2.85 3.30



B-372, FEMALE UNION TEE.



B-373. MALE UNION TEE.

#### UNION TEES.-B-372 and B-373.

SIZE	INCHES	1	3	1	1‡	11/2	2	21/2
	LE, PLAIN EACH EACH EACH	.45 .52	.57 .65	.70 .80	.95 1.10	1.15 1.30	1.70 1.95	3.20 3.70

Galvanized Union Ells and Tees, 50 per cent. added to Plain list.

## REVISED CLASSIFICATION AND PRICE LIST MALLEABLE FITTINGS.

#### (SUPERSEDING ALL PREVIOUS CLASSIFICATIONS.)

#### ADOPTED BY MANUFACTURERS JUNE 19TH, 1895.

CLASS A30 CENTS PER POUND.	ELBOWS, SIDE OUTLETS 4 in. and larger.
Bows	TEES, SIDE OUTLETS 3 in. aud larger.
ES	STREET ELLS
& L. COUPLINGS \frac{1}{2} in.	CROSSES 1 and 3 in., straight.
DUCERS	DROP ELLS
H. COUPLINGS iu.	DROP TEES
LS, R. & L	CAPS
& L. RETURN BENDS 3. 1.	LOCK NUTS
D COUPLINGS	REDUCERS
CLASS B. 20 CENTS PER POUND.	R. & L. COUPLINGS
.BOWS	R. H. COUPLINGS
LES	EXTENSION PIECES
BOWS, SIDE OUTLETS . 1 in. aud smaller.	WASTE NUTS 1 in. and larger.
EES, SIDE OUTLETS 4 iu. and smaller.	RETURN BENDS
FREET ELLS	45° ELLS
ROSSES	Y's 1 iu. and larger.
EOUCING CROSSES 1 in. and smaller.	RETURN BENDS, R. & L
ROP ELLS AND TEES } in. and smaller.	CLASS D13 CENTS PER POUND.
APS	ELBOWS & TEES
OCK NUTS	CROSSES
EDUCERS § x ‡, to ¾ x § in., inclusive.	STREET ELLS 1 in. and larger.
XTENSION PIECES § and · ½ in.	CAPS
. & L. COUPLINGS	LOCK NUTS
: H. COUPLINGS	REDUCERS
& L. ELBOWS in.	R. H. COUPLINGS 1 and 1\frac{1}{2} in.
VASTE NUTS 3 in. and smaller.	R. & L. COUPLINGS 1 in. and larger.
:HANDELIER HOOKS all sizes.	R. & L. ELBOWS
IETURN BENDS 3 and 1 iu.	45° ELBOWS
RETURN BENDS, R. & L 4, 1.	RETURN BENDS
VALL PLATES , all sizes.	Such Fittings as have smaller ontlets than 4 in. will be
50 ELLS 4 iu. and smaller.	classed "G."
/'s	CLASS E,-11 CENTS PER POUND.
CLASS C16 CENTS PER POUND,	ELBOWS & TEES
ELBOWS ½ and ½ x ½ in.	R. H. COUPLINGS $1\frac{1}{2}$ , 2.
LBOWS, R. & L	Such Fittings in this class that have outlets smaller than
rees ½ and ½ reducing.	I in. to be classed "D."

Retnri	Beuds, reduced;	Return Bends,	tapped on spread;	Elbows, tapped	on pitch	15 per cent.	added.
			lote loss then 100		•	15 man conf	

Ξι EL

TI

#### GALVANIZED FITTINGS.

CLASS	А	В	С	D	E
PRICE PER POUND	.40	.27	. 23	.20	.18



8-400. ELBOW.



B-401. SIDE OUTLET ELBOW.



B-402. TEE.



B-403. SIDE OUTLET TE



B-404. CROSS



B-405. SIDE OUTLET CROSS.



B-406 RNAMENT



B-407. BUSHIN



B-409 CAST-IRON FLANGE.

#### MALLEABLE RAILING FITTINGS.

SIZE INCHES	- Ž	3	1	14	1 +	2
B-400. ELBOW	.15	.18	.20	.35	.45	.72
	.20	.23	.25	.40	.50	_80
	.20	.23	.25	.40	.50	.75
	.30	.33	.35	.45	.55	.90
	.30	.33	.35	.45	.58	1.00
	.35	.38	.40	.50	.65	1.35
	.16	.18	.20	.25	.35	.90

Right and Left or Left Hand charged at 25 per cent. additional. Bushings reduce one or two sizes.

#### RAILING FLANGES .- B-408 and B-409.

SIZE INCHES	충	10	3	1	1‡	1 ½	2
B-40B	12	14 14	15 15	15 15	.20 .20	.28 .28	.30

#### BRASS FINISHED RAILING FITTINGS.

SIZE .	INCHES	1	11	1 1 1	2
B-400. ELBOW . B-401. ELBOW, SIOE OUTLET . B-402. TEE . B-403. TEE, SIOE OUTLET . B-404. CROSS . B-405. CROSS, SIDE OUTLET . B-406. ACORN ORNAMENT . B-408. FLOOR FLANGE .	EACH EACH EACH EACH EACH EACH EACH EACH	.80 1.10 1.20 1.50 1.50 1.70 2.00	1.20 1.70 1.70 2.00 2.00 2.25 2.50 .70	1.60 2.00 2.00 2.40 2.40 3.00 3.25 1.00	2.50 3.00 3.00 3.50 3.50 4.00 4.50 1.30

## ADJUSTABLE RAILING FITTINGS.



B-412. ELBOW



B-413. TEE.



B-414. CROSS



B-415. STAIR TEE



B-416. STAIR CROSS.

## ADJUSTABLE RAILING FITTINGS, IRON.

SIZE	INCHES	1	11	$1\frac{1}{2}$	2
B-413	EACH EACH EACH EACH EACH EACH EACH EACH	1.10 1.30 1.50 1.30 1.50	1.25 1.50 1.75 1.60 1.85	1.70 2.00 2.35 2.15 2.50	2.25 2.50 2.75 2.50 2.75

By means of these Fittings, almost any angle may be obtained in Railings for stairs and other places requiring a deviation from horizontal or perpendicular lines, which would otherwise require special patterns to attain the same results.

#### ADJUSTABLE RAILING FITTINGS, POLISHED BRASS.

SIZE .				 -			Fe.		 			,	IN	CHES	1	11	11/2	2 .
B-412 . B-413 . B-414 . B-415 . B-416	  	-	, , ,		-	-	•		 - ·	 	-			EACH EACH EACH	2.75 3.25 3.75 3.25 3.75	3.15 3.75 4.40 4.00 4.65	4.25 5.00 5.90 5.40 6.25	5.65 6.25 6.90 6.25 6.90



B-420, TEE.



B-421. CROSS.



B-426. LOAFER RAIL.

### ADJUSTABLE RAILING FITTINGS, IRON.-B-420, B-421, and B-426.

SIZE	1	11	11/2	2
B-420, STAIR LANDING TEE	.90	1.10	1.50	2.15
	1.00	1.20	1.60	2.40
	.30	.30	.30	.30











B-430.

B-431.

B-432,

B-433.

B-434.

### 45° ANGLE MALLEABLE IRON RAILING FITTINGS.

SIZE ,	1	1‡	1 ½	2	21/2	3
B-430. ELBOW EACH	/40	.70	90	1.44	2.00	3.00
SIDE OUTLET, NOT ILLUSTRATED EACH	.50	.80	1.00	1.60	2.30	3.40
B-431. ELBOW EACH	. 40	.70	.90	1.44	2.00	3.00
SIDE OUTLET, NOT ILLUSTRATEO EACH	.50	.80	1.00	1.60	2.30	3.40
B-432. TEE	. 50	.80	1.00	1.60	2.40	3.80
SIDE OUTLET, NOT ILLUSTRATED EACH	.70	.90	1.10	1.80	2.80	4.30
8-433. CROSS	.70	.90	1.16	2.00	3.00	4.50
SIDE OUTLET, NOT ILLUSTRATED EACH	.80	1.00	130	2.70	3.50	5.20
8-434. FLOOR FLANGE EACH	.30	.40	. 56	.60	1.00	1.50

Always furnished tapped right hand unless otherwise ordered. Right and left or left hand charged at 25 per cent. additional. Angle Railing Fittings can be furnished in brass.

## THE "GRIFFIN" FOOT RAIL AND BRACKET.









B-441. FOOT RAIL AND BRACKET.

SIZE ONE INCH	Plain Iron.	Bronzed Iron.	Golvanized Iron.	Artistic Brass.
BRACKETS	.50	.85	. 85	3.50
	.50	.75	. 75	3.00
	.15	.25	. 25	1.40







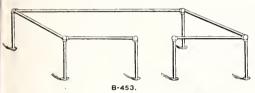
B-448. HINGE FOR PIPE GATES



B-449, BRASS RAILING CAP.

#### RAILING TRIMMINGS.

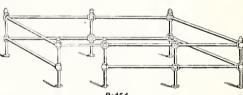
SIZE INCHES	3	1	11	1 ½	2
COUNTER BRACKETS, CAST IRON EACH FINISHED BRASS CAPS EACH	. 25 . 60	.30	.50 1.00	1.00 1.20	1.25 1.75
HINGE FOR PIPE GATES EACH	. 60	.70	.85	1.25	1.50



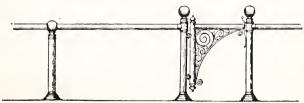
#### PLEASE READ THIS NOTICE WITH CARE.

To construct a Railing two pipes high, the upper outlet of all fittings used in lower pipes should be tapped with teft-hand thread, but when orders are sent us without specifying how outlets are to be tapped, all fittings will invariably be furnished right-hand.

As the fittings do not need to be steam or vater-tight, a sufficiently clean thread to screw up vell and make a good job can be made by running a left-hand lap into any outlet tapped right-hand.



A neat and simple gate can be made by reducing with a bushing the outlets of the fittings on each side of the passageway, and then using a smaller size pipe to slide back and forward inside of the top rail, with a pin to prevent its running back too far. (See dotted line in cut.)



B-455, DESIGN FOR BRASS RAILING.

Prices on Brass Posts, Gates, and all trimmings furnished upon application.

## BRASS STEAM AND WATER FITTINGS.

### ROUGH AND FINISHED.



B-465. ELBOW.



B-466. TEE.



B-467, FINISHED UNION.

#### ELBOWS.

SIZE INCHES	į,	1	8	1/2	3	1	1}	1}	2	21	3	31	4
ROUGH EACH REDUCING, ROUGH . EACH 45° ROUGH EACH		. 17 . 22 . 25	. 21 26 . 30	.28 .35 .40	.35 .45 .50	.62	1.10 1.25	1.40 1.65	1.90 2.25	4.40 5.25	5.65	8.75	10.00 12.50
STREET, ROUGH EACH				.55	.75	1.00	1.80	2.50	3.25				

### TEES.

. [	SIZE INCHES	ŧ	ł	ŝ	1/2	3	1	1}	11/2	2	21	3	31/2	4
	ROUGH EACH REDUCING, ROUGH £ACH	.15	.20	.30	.40	. 50	.75 .95						9.00 11.25	

#### CROSSES.

SIZE INCHES	ł	3	1/2	3	1	1}	11	2	21/2	3	31/2	4
ROUGH EACH REDUCING, ROUGH . : EACH	.30	.40	. 50 . 65	.60 175	.80 1.00		2.00 2.50	3.50 4.40	5.00 6.25	7,00 8.75	10.00 12.50	14.50 18.00

#### REDUCERS.

SIZE INCHES	38	j.	2	1	11	11/2	2	2 1	3
ROUGH EACH	.22	.32	.45	.65	.90	1.12	1.85	3.00	4.50

## RETURN BENDS.

SIZE INCHES	1/2	1	1	11	11/2	2
CLOSE PATTERN, ROUGH EACH OPEN PATTERN, ROUGH EACH	.40	.75 1.00	1.15 1.35	•1.65 2.00	2.50 3.00	4.00 4.50

### UNIONS.

SIZE INCHES	1 g	ł	ą	1/2	3 2	1	11	11/2	2	21/2	3
FINISHED EACH ROUGH, EXTRA HEAVY EACH	. 32	:36	. 50 . 55							6.00 6.50	

Finished Fittings, double above list.

## BRASS STEAM AND WATER FITTINGS.

ROUGH AND FINISHED.



B-470. COUPLING.



B-472. CAP



B-474. PLUG.

## COUPLINGS, CAPS, AND PLUGS.

AZE INCHES	l l	1	3 8	1/2	3	1	11	11/2	2	21/2	3
COUPLINGS, ROUGH EACH COUPLINGS R. & L., RGH., EACH CAPS, ROUGH . EACH PLUGS, ROUGH . EACH	10 .15 .09	.14 .17 .15 .10	.16 .20 .20 .12	.25 .30 .25 .15	.37 .45 .35 .20	.50 .60 .45 .28	.60 .75 .60 .40	.90 1.12 .80 .50	1.35 1.75 1.10 .90	2 40 2.00 1.25	3.50 3.00 2.00



B-476. NIPPLE.



B-478. LOCKNUT



B-480. BUSHING.

#### NIPPLES .- B-476.

SIZE INCHES	ł	14	a a	1/2	3	1	11	$1\frac{1}{2}$	2	21/2	3
CLOSE EACH	12	15	20	25	30	40	.60	90	1 25	2.50	3.50
ROUGH, TO 4 IN LONG, EACH	15	20	30	35	45	60		1 25	1 60	3.00	4.50

#### LOCKNUTS AND BUSHINGS.-B-478 and B-480.

SIZE INCHES	18	1	ą	1/2	24	1	11	11/2	2	$2\frac{1}{2}$	3
LOCKNUTS, ROUGH, EACH BUSHINGS EACH	10	10 10	12 12	.15 14	.20	.30	.45 .50	.70 .67	95 1.00	1.50 1.50	2.75 2.50

Bushings reducing more than two sizes, made to order at special price.

Finished Fittings donble above list.

#### SEAMLESS DRAWN BRASS TUBING.

### MADE TO CORRESPOND WITH IRON PIPE, AND TO FIT IRON PIPE FITTINGS.

SIZE INCHES	18	14	â	1/2	3	1	11	1 1/2	2	$2\frac{1}{2}$	3	31/2	4	5	6
APPROX. WEIGHT FT., LBS. PER POUNO	.25 .62	.43 .54	.62 .48	.90	1.25	1.70	2.50 .32	3.00	4.00	5.75 .32	$8.30 \\ .32$	10.90 .36	12.70 .36	15.75	18.31 .52

These These are kept in stock up to 4-inch in 12-foot lengths. Special lengths to order.

We can furnish Copper Tubes same sizes as above. Brass and Copper Tubes are always shipped without threads or outlings, unless otherwise specified. Threads and Couplings charged extra.

### STANDARD BRASS VALVES.



C-1. GLOBE VALVE.



C-2. ANGLE VALVE



C-3. CROSS VALVE.

## GLOBE AND ANGLE VALVES, SCREWED.-C-1 and C-2.

SIZE INCHES	18	1	å	1/2	3	1	114	11/2	2	21	3	3 ½	4
EACH	.72	.72	.77	1.00	1.26	1.80	2.52	3.50	5.30	10.00	14.40	26.50	36.

## CROSS VALVES, SCREWED .- C-3.

,										
SIZE INCHES	1/4	<del>8</del>	1/2	3	1	11	1 1	2	51	3
EACH	1.25	1.25	1.50	2.00	2.50	3.50	5.00	8.00	16.00	24.



C-B. HORIZONTAL CHECK.



C-10. VERTICAL CHECK.



C-12. ANGLE CHECK.

## CHECK VALVES .- C-8, C-10 and C-12.

SIZE INCNES	1/8	14	actos	1/2	2	1	1‡	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3
C-8	. 65 . 72	.65						3.15 3.50			



C-16. GLOBE VALVE.

## BRASS VALVES.



C-22. GLOBE VALVE.



C-23. ANGLE VALVE

## BRASS GLOBE, ANGLE AND CHECK VALVES, FLANGED.

SIZE INCHES	1	11	14	2	21/2	3	31/2	4
GLOBE AND ANGLE EACH	6.75	$8.50 \\ 8.25 \\ 4\frac{1}{2}$	10.50	16.00	23.00	35.00	50.00	70.00
HORIZONTAL CHECK, EACH	6.50		10.15	15.50	22.00	33.50	47.50	66.50
DIAM. FLANGES INCHES	4		5	6	7	7½	81	9

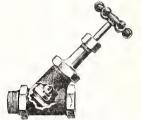
#### LOCK SHIELD VALVES .- C-22 and C-23.

SIZE	INCHES	ectro	12	3	1	11	1 ½
ROUGH BODY, PLAIN	EACH	1.10	1.35	1.60	2.25	3.25	4.85
	EACH	1.40	1.65	1.95	2.65	3.70	5.35

Keys, Plain, each. 20 cents. Finished and Nickel Plated, each, 50 cents.



C-28. SWINGING CHECK VALVE.



C-34. BRASS Y VALVE.

## SWINGING CHECK VALVES,-C-28.

SIZE INCHES	·}	3	1.	2	1	11	1 - 1 - 1	2	2.5	3
HORIZONTAL EACH	1.25	1.25	1 30	1.75	2.25	3.25	4 25	6.25	11.50	16.00

## BRASS STRAIGHTWAY BLOW-OFF OR Y VALVES .- C-34.

SIZE INCHES	3	1	1.1	13	9	21
EACH	-	3.25	4.00	5.75	9.00	18.50

Unless otherwise specified, Y Valves will be sent with Male and Female ends as shown in cut.

### BRASS VALVES WITH JENKINS DISC.



C-42. GLOBE VALVE.



C-43. ANGLE VALVE.



C-45. GLOSE VALVE, WOOD WHE

### GLOBE AND ANGLE VALVES WITH JENKINS DISC.-C-42 and C-43.

SIZE INCHES	1	ą	1/2	3	1	14	11	2	21/2	3
EACH	1.10	1.25	1.60	2.20	2.80	4.00	5.50	8.00	15.75	22.0

### GLOBE AND ANGLE VALVES WITH JENKINS DISC, WOOD WHEEL .- C-45.

SIZE INCHES	1/2	3	1	1‡	1 ½	2
ROUGH BODY, PLAIN EACH ROUGH BODY, PLATED TRIMMINGS EACH ROUGH BODY, PLATED ALL OVER EACH FINISHED ALL OVER EACH FINISHED AND PLATED ALL OVER EACH	2.00	2.50	3.20	4.50	6.25	10.50
	2.30	2.80	3.50	4.80	6.55	10.80
	2.40	2.90	3.60	4.90	6.65	10.90
	2.50	3.00	3.75	5.25	7.25	11.75
	2.90	3.40	4.15	5.65	7.65	12.15



C-51. HORIZONTAL CHECK.



C-53. VERTICAL CHECK.



C-55, ANGLE CHECK.

### CHECK VALVES WITH JENKINS DISC .- C-51, C-53 and C-55.

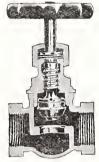
SIZE INCHES	1	3	- <del>j</del>	3	1	1‡	11	2	2 }	3
EACH	1.10	1.20	1.30	1.90	2.60	3.60	5.00	7.50	13.50	20.50

### BRASS VALVES.

#### EXTRA HEAVY.

SUITABLE FOR A WORKING PRESSURE OF 200 POUNDS.





C-60. SECTIONAL.

## EXTRA HEAVY GLOBE AND ANGLE VALVES.

Ε	INCHES	1/4	3 8	1/2	3	1	11	13	2	21	3
REWED ENDS .	EACH	1.50	1.75	1.85	3.00	3.75	5.50	7.50	11.00	22.00	30.00
INGED ENDS .	. EACH					9.50	13.50	16.50	24.00	45.00	65.00



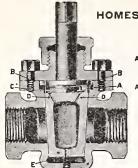
C-62, HORIZONTAL CHECK VALVE,

#### EXTRA HEAVY CHECK VALVES, HORIZONTAL AND ANGLE.

E INCHES	1/4	3	$\frac{1}{2}$	1	1	114	11	2	2 1	3
EWED ENDS EACH	1.50	1.75	1.85	3.00						30.00
NGED ENDS EACH					9.50	13.50	.16.50	24.00	45.00	65.00

bur High Pressure Valves are made of the best Steam Metal, with Bronze Metal Disc, and are warranted to give excepty good service under 200 pounds steam pressure.

hese Valves are so constructed they can be re-ground without removing Valve from steam line and can be re-packed ut shutting off steam.



## HOMESTEAD BALANCED PLUG VALVES.

ALL BRASS.

ADAPTED FOR STEAM, AIR, HYDRAULIC AND HIGHEST PRESSURES.

A PERFECT BLOW-OFF, EASY TO OPER-ATE, ALWAYS TIGHT.



C-70. HOMESTEAD STRAIGHTWAY VALVE.

C-72. HOMESTEAD ANGLE VALVE.

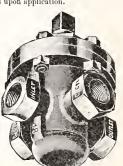
## STRAIGHTWAY OR ANGLE VALVES.

F25									
	SIZE INCHES	1	2	1	11/4	11/2	2	21/2	3
	FOR SERVICE TO 150 POUNDS EACH FOR SERVICE TO 500 POUNDS EACH	1.65 3.00	2.10 4.50	3.00 6.15	4.50 7.80	6.30 10.50	10.95 15.00	18.00 30.00	30.0

Double Extra Heavy Valves for service to 1,500 pounds pressure. Prices upon application.



SPECIAL CATALOGUE
OF
HOMESTEAD VALVES
FURNISHED
UPON APPLICATION.



C-74. HOMESTEAD THREE-WAY VALVE.

C-76. HOMESTEAD FOUR-WAY VALVE.

#### THREE-WAY VALVES.

SIZE INCHES	ž	ą	1	1}	11-	2
FOR SERVICE TO 200 POUNDS EACH FOR SERVICE TO 500 POUNDS EACH	2.40	4.65	6.00	8.10	10,80	16.2
	5.10	8.55	11.40	14.70	16,95	22.5

#### FOUR-WAY OPERATING VALVES.

SIZE INCHES	1/2	3	1	11	11	2
FOR SERVICE TO 400 POUNDS EACH	13.50	16.95	23.55	28.20	33.75	42.7

Valves with flanged ends, 15 per cent. extra.

## SPECIAL BRASS VALVES.



C-82. GLOBE VALVE.



C-83. ANGLE VALVE



C-84. CROSS VALVE.

### ASBESTOS DISC BRASS VALVES.

-		/	,			-				,	
IZE	INCHES	1	8 8	1-	4	1	1 }	$1\frac{1}{2}$	2	2 <del>1</del>	3
-82	AND C-83 EACH	1.10	1.25	1.60	2.20	2.80	4.00	5,50	8.00	15.75	22.00
-84	EACH			2.25	2.50	3.25	4.75	6.25	9.50	20.00	30,00
CTRA	DISCS AND HOLDERS, COMPLETE EACH	. 14	.07	.09	.10	. 12	.18	. 25	. 36	.48	.60



C-92. RADIATOR VALVE, FEMALE.



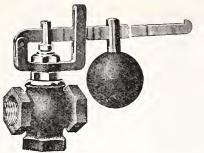
C-96. RADIATOR VALVE, WITH UNION.

#### ASBESTOS DISC RADIATOR VALVES.

SIZE	INCHES	3	1	11/4	1.	2
	ROUGH BODY, N. P. ALL OVER EACH ROUGH BODY, N. P. ALL OVER EACH	2.85 3.80	3 65 4 75	4,90 6,40	6.75 8 10	11.00 13.10

For Iron Body Asbestos Valves and Cocks see page 93.

### BRASS VALVES.





C-125. SAFETY VALVE.

C-127. LOW-PRESSURE SAFETY VALV

#### SAFETY VALVES, STEAM METAL.-C-125.

SIZE INCHES	4	3	1/2	4	1	1‡	1 ½	2	21	3
BRASS DISC EACH JENKINS DISC EACH	2.20	2.50	3.25 4.12	3.90 4.95	4.70 5.50	7.15 8.25	9.00 10.15	12.50 15.40	22.50	33.1

### LOW PRESSURE SAFETY VALVES, STEAM METAL. - C-127.

SIZE INCHES	3	1	1‡	1 ½	2
EACH	2.60	3.30	4.50	6.35	8.65







C-131. BUTTERFLY VALVE.



C-132. VACUUM VALV

#### THROTTLE, BUTTERFLY AND VACUUM VALVES.

i.	3	1/2	3	1	1 ‡	11/2	2	2 }	3
			3.00	4.00	5.00	7.00	10.00	19.00	
			3.10	4.40	5.65	6.75	10.00	13.75	21.0
1.00	1.25	1.50	2,00	2.50					
				3.10	3.10 4.40	1.00 1.25 1.50 2.00 2.50	1.00 1.25 1.50 2.00 2.50	1.00 1.25 1.50 2.00 2.50 5.65 6.75 10.00	1.00 1.25 1.50 2.00 2.50 5.65 6.75 10.00 13.75

<sup>\*</sup>Suitable for a working pressure of 175 pounds. For larger sizes with Iron Body see page 99, †Butterfly Valves do not close steam or water tight.



## HOSE VALVES.

FOR EOOY HOSE GATE VALVES SEE PAGE 101.



C-136, HOSE VALVE, WHEEL HANDLE.

C-137. HOSE VALVE, TEE HANDLE.

#### HOSE VALVES BRASS),-C-136 and C-137.

SIZE	INCHES	ı	1.}	1 ½	5	21
ROUGH BODY, PLAIN	. EACH	3.15 3.65	3.70 4.30	4.75 5.50	7.00 8.00 11.50	8.50 9.75 14.50

These Valves have standard iron pipe thread on bottom and Chicago standard hose thread on side, 1 to 2 inch clusive. The 2½ inch has the Chicago Fire Department thread on side. Can be furnished with other threads than ose specified when wanted.



C-138. GARDEN HOSE VALVE



C-140. SINGLE GATE HOSE VALVE.

#### GARDEN HOSE VALVES (BRASS).- C-138.

SIZE INCHES	1	3	1	1}	1½	5	21/2
ROUGH BODY, FINISHED TRIMMINGS EACH	1.65	1.65	2.20	3.40	4.75	7.00	12.00

These Valves have standard iron pipe thread on bottom, and are made with either Chicago or California hose thread a side. Can be furnished with other threads than those specified when so ordered.

#### SINGLE GATE HOSE VALVES .- C-140.

SIZE	 INCHES	2	2 }	3
WITH CAP AND CHAIN WITHOUT CAP AND CHAIN		7.60 6.20	13.00 11.50	17.60 16.00

## RADIATOR VALVES.



C-142, FEMALE VALVE.

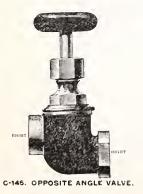
WHEN ORDERING, GIVE SIZE AND NUMBER, NOT DESCRIPTION.



C-143. UNION VALVE.

#### QUICK-OPENING VALVES .- C-142 and C-143.

SIZE INCHES	3	1	1 {	1 ½	.2
NO. 1. HOT WATER, FEMALE, ROUGH BODY, PLATED TRIMMINGS . EACH NO. 2. HOT WATER, FEMALE, ROUGH BODY, PLATED ALL OVER . EACH NO. 3. HOT WATER, UNION, ROUGH BODY, PLATED TRIMMINGS . EACH NO. 4. HOT WATER, UNION, ROUGH BODY, PLATED ALL OVER . EACH	1.85	2.40	3.60	4.85	7.25
	1.95	2.65	3.70	5.00	7.75
	2.60	3.35	4.90	6.65	10.25
	2.85	3.65	5.05	7.10	10.85
NO. 5. STEAM, FEMALE, ROUGH BODY, PLATED TRIMMINGS . EACH NO. 6. STEAM, FEMALE, ROUGH BODY, PLATED ALL OVER . EACH NO. 7. STEAM, UNION, ROUGH BODY, PLATED TRIMMINGS . EACH NO. 8. STEAM, UNION, ROUGH BODY, PLATED ALL OVER	2.70	3.50	4.75	6,50	10.7
	2.85	3.65	4.90	6,75	11.0
	3.75	4.65	6.25	8,00	12.8
	3.80	4.75	6.40	8,10	13.1



OPPOSITE ANGLE VALVES .- C-146.

SIZE	INCHES	3	1	11	1 ½	2
NO. 9. ROUGH BODY, PLATED TRIMMINGS	. EACH	3,05	3,80	5.30	7.30	11.85
NO. 10. ROUGH BODY, PLATED ALL OVER .		3,15	3,90	5.40	7.40	11.95

### OPPOSITE ANGLE VALVES, WITH UNION.

1 1	$1\frac{1}{2}$ 2
05 6.85 15 6.95	8,85 14.18 8,95 14.28
15	6.95



### RADIATOR VALVES.

WHEN ORDERING GIVE SIZE AND NUMBER, NOT DESCRIPTION.



C-15D. FEMALE VALVE.

C-151. UNION VALVE.

RADIATOR VALVES, ROUGH BODY.-C-150 and C-151.

SIZE	3 4	1	11	11	2
NO. 20. FEMALE VALVES, BRASS DISC, N. P. TRIMMINGS . EACH	2.00	2.65	3.55	4.85	7.35
NO. 21. FEMALE VALVES, BRASS DISC, N. P. ALL OVER . EACH	2.10	2.75	3.70	5.00	7.75
NO. 22. FEMALE VALVES, JENKINS DISC, N. P. TRIMMINGS . EACH	2.70	3.50	4.75	6.50	10.75
NO. 23. FEMALE VALVES, JENKINS DISC, N. P. ALL OVER . EACH	2.85	3.65	4.90	6.75	11.00
NO. 24. UNION VALVES, BRASS DISC, N. P. TRIMMINGS . EACH NO. 25. UNION VALVES, BRASS DISC, N. P. ALL OVER . EACH NO. 26. UNION VALVES, JENKINS DISC, N. P. TRIMMINGS . EACH NO. 27. UNION VALVES, JENKINS DISC, N. P. ALL OVER . EACH	2.75	3.60	4.90	6.60	10.25
	2.90	3.75	5.05	7.10	10.85
	3.75	4.65	6.25	8.00	12.85
	3.80	4.75	6.40	8.10.	13.10

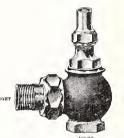
Radiator Valves can be furnished tapped differently, if specially ordered.



C-153. LOCK SHIELD VALVE,



C-154. RADIATOR KEY.



C-155. LOCK SHIELD VALVE,

LOCK SHIELD RADIATOR VALVES, ROUGH BODY .- C-153 and C-155.

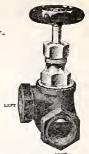
SIZE .		3	1	14	$1\frac{1}{2}$	2
NO. 29. NO. 30.	FEMALE VALVES, BRASS DISC, N. P. TRIMMINGS . EACH FEMALE VALVES, BRASS DISC, N. P. ALL OVER . EACH FEMALE VALVES, JENKINS DISC, N. P. TRIMMINGS . EACH FEMALE VALVES, JENKINS DISC, N. P. ALL OVER . EACH	2.00 2.10 2.70 2.85	2.65 2.75 3.50 3.65	3.55 3.70 4.75 4.90	4.85 5.00 6.50 6.75	7.35 7.75 10.75 11.00
NO. 33. NO. 34.	UNION VALVES, BRASS DISC, N. P. TRIMMINGS. EACH UNION VALVES, BRASS DISC, N. P. ALL OVER. EACH UNION VALVES, JERKINS DISC, N. P. TRIMMINGS. EACH UNION VALVES, JERKINS DISC, N. P. ALL OVER. EACH EACH	2.75 2.90 3.75 3.80	3.60 3.75 4.65 4.75	4.90 5.05 6.25 6.40	6.60 7.10 8.00 8.10	10.25 10.85 12.85 13.10

Nickel Plated Keys extra, each, 40 cents. Radiator Valves can be furnished tapped differently, if specially ordered.



### RADIATOR VALVES.

WHEN ORDERING, STATE IF RIGHT OR LEFT-MAND VALVES ARE WANTED.

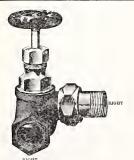


C-158. RIGHT-MAND CORNER VALVE.

C-159. LEFT-HAND CORNER VALVE.

#### CORNER RADIATOR VALVES WITH JENKINS DISCS.-C-158 and C-159.

SIZE	3	1	1‡	11	2
JENKINS DISC, ROUGH BODY, NICKEL PLATED TRIMMINGS . EACH JENKINS DISC, ROUGH BODY, NICKEL PLATED ALL OVER . EACH	3.00	3.85	5.25	7.25	11.85
	3.15	4.00	5.50	7.50	12.10



C-160. RIGHT-HAND CORNER VALVE.



C-161. LEFT-HAND CORNER VALVE.

#### CORNER RADIATOR VALVES WITH UNION AND JENKINS DISCS.-C-160 and C-161.

SIZE INCHES	3	1	11	11	2
JENKINS DISC, ROUGH BODY, NICKEL PLATED TRIMMINGS . EACH JENKINS DISC, ROUGH BODY, NICKEL PLATED ALL OVER . EACH	4.15	5.15	6,90	8,85	14.15
	4.25	5.25	7.05	8,95	14.45



## UNION RADIATOR ELBOWS .- C-164.

SIZE INCHES	3 4	1	11	11/2	2
ROUGH BODY, PLATED ALL OVER EACH		1.85	2.40	3.15	4.80
FINISHED AND PLATED ALL OVER FACH		2.35	3.05	4.05	5.65



FEMALE T-HAND VALVE.

#### WEBER CORNER ANGLE RADIATOR VALVE. - C-175.

SIZE INCHES	ì	1	11	11.	2
FEMALE, ROUGH BODY, N. P. ALL OVER EACH UNION, ROUGH BODY, N. P. ALL OVER EACH	3.25	1.25	5.75	7.75	12.50
	4.20	5.25	7.05	8.95	14.45

All Valves are tapped Right Hand, unless otherwise ordered. Specify whether Right or Left Hand corner is wanted; also Female or Union pattern.









C-178. VICTOR NO. 1. C-179. VICTOR NO. 2.

C-187, NICKEL PLATED . . . . . . . . . . . EACH

SECTIONAL.

1.25

C-180, NO. 7 FLOAT.

#### DAVIS AUTOMATIC AIR VALVES.

IUMBER	1	5	7
HCKEL PLATED EACH	. 65	. 65	1.25

THE MARSH-PAUL AUTOMATIC DRAIN PIPE AIR VALVE.

greater than any other valve yet produced, owing to its special seat. It cannot be

solid piece of steam metal. After years of experimenting with other valves, The



VALVE.

where their system is installed.

Paul System Company have adopted this valve in all of their heating specifications MARSH AUTOMATIC DRAIN PIPE VALVE.

C-188, NICKEL PLATED	EACH	1.25

These Valves are made with drain pipe connections for discharging foul air and surplus water to basement, or elsewhere, with & or 4-inch connection.



DRAIN PIPE









RADIATOR AIR VALVES. (1-8 Inch only.)

 PIGURE
 C-190
 C-191
 C-192
 C-193

 NICKEL PLATED
 EACH KEYS, NICKEL PLATED, EXTRA
 .35
 .45
 .70
 .50

 KEYS, NICKEL PLATED, EXTRA
 NETEACH
 ...
 .06













. C-200. C-201. C-201.

### MARSH AUTOMATIC AIR VALVES.

FIGURE	C-197	C-198	C-199	C-200	C-201	C-202
NICKEL PLATED EACH	1.15	1.25	1.15	1.50	1.25	1.40







C-208.



C-209.



C-210.

## CLEVAUC AUTOMATIC AIR VALVES.

FIGURE	C-207	C-208	C-209	C-210
NICKEL PLATED	1.25	1.25	1.40	.75

### BRASS COCKS.







C-221. STEAM COCK, FLAT HEAD.



C-224. THREE-WAY COCK

## STEAM COCKS, STANDARD.

IZE	INCHES	1.	1	1	Ĩ	1	1	1}	Ιį	2	2 }	3	3 1	4
:-220, C-221	EACH													50 00
:-220, C-221, WITH														
:-224, THREE-WAY	COCK . EACH				2.50	3.00	3.75	5.75	7.15	11.00	18.75	26,00	50,00	20 00

Steam Cocks with square head will always be furnished unless otherwise ordered.



C-228. EXTRA HEAVY STEAM COCK.



C-230. EXTRA HEAVY STEAM COCK, FLANGED.

## STEAM COCKS, EXTRA HEAVY.

SIZE	INCHES	1	3	7	1	1	11	1 ½	2	2}	3	31	4
C-228													
	LACH					10.00	14.20	14.20	21.00	41.00	65.00	84.00	120.00

Iron Cocks, see page 94. Asbestos Cocks, see page 93.







C-238. EXTRA HEAVY, WITH CHE

## GAS SERVICE COCKS, TEE HANDLE.-C-235.

SIZE	 	 INCHES	1 38	1 1
C-235	 	 EACH	.75 .85 .90 1.00	.95 1.15 1. 1.45 1.75 2.

## GAS SERVICE COCKS, FLAT HEAD.-C-236 and C-238.

SIZE INCHES	1	8 8	1/2	3	1	11/4	11	2	$2\frac{1}{2}$	3
C-236	.75	.85	.95 1.45	1.15 1.75	1.50 2.50	2.25 3.25	3.10 4.75	5.00 7.50	11.00	16.0



C-242. STEAM SWING JOINT.



C-243. EXPANSION JOINT.

### BRASS STEAM SWING JOINTS, ROUGH.-C-242.

SIZE		 	 		NCHES	3 8	1/2	3	1	11	11	2
EAC	1	 	 	 		1.25	1.75	2.40	3.50	4.50	6.25	9.00

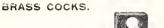
## BRASS EXPANSION JOINTS .- C-243.

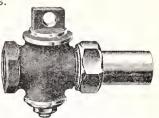
SIZE INCHES	į.	3	1	11	1 ½	2	21/2	3
STANDARD TRAVERSE INCHES	2	21	21	21	21 5:00	2½ 8 00	2½ 17.50	23
EASTERN TRAVERSE		4	4	4	4	4	5	5
EACH	3.80	4.00	4.90	6.30	7.40	9,10	20.00	28.0

When used for high-pressure steam, the expansion is 1 inch in 50 feet of pipe. Longer Traverse to order.



C-246, METER COCK.





C-247. UNION METER COCK.

### GAS METER COCKS, FLAT HEAD .- C-246 and C-247.

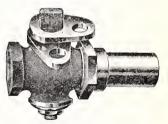
SIZE	INCHES	1.	4	1	11	1 ½	2
C-246	EACH EACH	1.30	1.40	1,95	3.00	4.25	6.00
C-247		1.40	1.55	2,20	3.40	5.00	7.00



C-248, LOCK METER COCK.



C-249. LOCK SERVICE COCK.



C-250. LOCK UNION METER COCK.

#### LOCK METER COCKS.-C-248 and C-250.

SIZE	NCHES	1/2	1	1	11	11/2	2
C-248 .	EACH	1.40	1.75	2.30	3.85	5.50	7.75
C-250 .	EACH	1.50	1.80	2.50	4.00	5.50	8.00

#### LOCK GAS SERVICE COCKS, FLAT HEAD.-C-249.

SIZE	. INCHES	1/2	3	1	1‡	1 ½	2
EACH	 	1.30	1.60	2.10	3.50	5.00	7.00



### GAS STOVE COCKS, ROUNDWAY.-C-254.

SIZE	 INCHES	- j	3	1
WITHOUT CHECK	 . EACH	1.20 1.30	1 90 2 00	2 75 3 00

## STANDARD IRON-BODY VALVES.



C-375. GLOBE VALVE, PLAIN TOP.



C-376. ANGLE VALVE, PLAIN TOP

### IRON-BODY GLOBE AND ANGLE VALVES, PLAIN TOP.

SIZE	INCHES	1	14	1 ½	2	5 <del>j</del>	3
SCREWED ENDS	EACH	2 25	2.75	3.50	5.40 7.00	7.35 9.00	9.80 12.50



C-377. GLOBE VALVE, YOKE TOP.



C-378. ANGLE VALVE, YOKE TOP.

## IRON-BODY GLOBE AND ANGLE VALVES, SCREWED ENDS, WITH YOKE TOP.

SIZE	INCHES	5	5 }	3	3 }	4	4½
EACH AVERAGE WEIGHT	POUNDS	7.00 13	9.00 16	12.50 25	15.25	19.00 57	24.00 70
SIZE	IHCHES	5	6	7	8	10	12
	POUNDS	27.00 87	37.50 123	63.00 174	72.00 239	114.00 425	170.00

### STANDARD IRON-BODY VALVES.



C-379. CROSS VALVE, PLAIN TOP.



C-38D, CROSS VALVE, YOKE TOP.

## IRON-BODY CROSS VALVES, SCREWED AND FLANGED ENDS.

ZE	INCHES	2	2 ½	3	3 1	4	4 ½	5	6	7	8	10	12
LAIN TOP, SCREWED OKE TOP, SCREWED LAIN TOP, FLANGED OKE TOP, FLANGED	EACH EACH	8 50 9 00	11 75 11 75	16 25 16 50	20 00	23.50		35 25	47 25	78 00	92 00		240 00



C-385, HORIZONTAL CHECK.



C-386. ANGLE CHECK,



C-388. SWING CHECK VALVE.

### IRON-BODY CHECK VALVES, SCREWED AND FLANGED ENDS.

SIZE			INCHES	2	2 1	3	3 ½	4	4 1	5	6	ĩ	8	10
C-385, C-388,	C-386, SCREW	SCREWED FLANGED ED	 . EACH	5 25	$\frac{8.25}{10.00}$	11.50 12.00	15 50 16.00	$\frac{18.00}{18.00}$	22.50	26.00 25.00	35.00 $32.00$	50.00 41.00	62.00 50.00	105 00 115 00 65 00 65 00

### STANDARD IRON-BODY VALVES.



C-392. GLOBE VALVE, FLANGED ENDS.



C-393. ANGLE VALVE, FLANGED ENDS

### IRON-BODY GLOBE AND ANGLE VALVES, FLANGED ENDS.

SIZE INCHES	2	21/2	3	3½	4	41	5	- 6	7	8	10	12
DIAMETER OF FLANGES	6 8.60	7 10.75	73 15.00	8 <u>1</u> 18.50	$\frac{9}{22.50}$	91 27.50	10 31.00	11 42.00	$^{12\frac{1}{2}}_{68.00}$	$\frac{13\frac{1}{2}}{77.00}$	16 123.00	19 187.0



### IRON-BODY SAFETY VALVES.

l	SIZE INCHES	11	1 ½	2	21/2	3	3 /	4	4 1/2	5	6
	GLOBE EACH	5,00	5.80	7.80	13.25	17.25	23,00	28.75	34.50	41.50	57.71
I	ANGLE EACH	5.00	5.80	7.80	13.25	17.25	23,00	28.75	34.50	41.50	57.71
I	GLOBE OR ANGLE, FLANGED ENOS, EACH	6.75	7.75	10.25	16.00	21.50	27.50	34,00	40.00	48.00	65.00

C-397. GLOBE SAFETY VALVE.

#### IRON-BODY BUTTERFLY VALVES,-C-399.

SIZE	INCHES 1	11	2	21/2	3	31/2	4	5	6
SCREWED	. EACH 6.35								42,50 47,00





C-399. BUTTERFLY VALVE.

## JENKINS DISC IRON-BODY VALVES.



C-40S.



C-406.



GLOBE VALVE, FLANGED ENDS

### JENKINS DISC IRON-BODY GLOBE AND ANGLE VALVES.

SIZE INCH	s 2	2 1	3	31	4	4 <u>t</u>	5	6	ĩ	8	10	12
YOKE TOP, SCREWED EAC PLAIN TOP, FLANGED EAC	н 7.25 н 10.00 н 8.50 н 11.75	12.00 13.00	16.75 18.00	19.50	24.00	36.00	40.00	48.00				

#### DIMENSIONS OF IRON-BODY VALVES WITH JENKINS DISC.

SIZE INCHES	2	$2\frac{1}{2}$	3	3 }	4	41/2	5	. 6	7	8	10	12
DIAMETER OF FLANGES	6 6 3 <del>1</del>	7 7 11 12	94 94 45	8½ 10 5§	9 113 57 57	91 121 61	10 13 6½	11 16 8	12½ 16 8½	13+ 18+ 9+	$16 \\ 21\frac{1}{4} \\ 11$	19 $24!$ $123$

#### JENKINS DISC IRON-BODY CHECK VALVES.

SIZE INCHES	21/2	3	3 }	4	5	6
SCREWED ENDS . EACH FLANGED ENDS . EACH		14.00 16.50	17.00 20.00	20.00 23.00	30.00 33.00	40.00 43.00

### JENKINS DISC IRON-BODY CROSS VALVES.

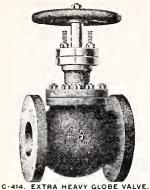
SIZE INCHES	$2\frac{1}{2}$	3	31	4	4 ½	5	в
SCREWED ENDS EACH FLANGED ENDS EACH	16.00	21.00	26.00	30.00	42.00	45.00	58.00
	19.00	24.00	29.00	33.00	45.00	48.00	62.00

JE	NK	INS	D	SCS.	

SIZE INCHES	t d	3	į.	3	1	14	1 ½	2	. 21
EACH	.03	.04	.04	.05	.06	. 09	.12	.18	24
SIZE INCHES	3	3 <u>‡</u>	4	5	6	7	8	10.	12
EACH	. 33	.45	. 52	.68	. 90	.98	1.20	1.75	2.25

All our Valves are tested to 200 pounds, and are always supplied with stems, packed ready for use, without extra charge.

## EXTRA HEAVY IRON-BODY GLOBE AND ANGLE VALVES.



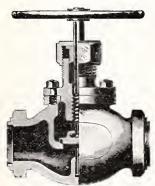
SUITABLE FOR A WORKING PRESSURE OF 200 POUNDS.



C-415. EXTRA HEAVY ANGLE VALVE.

EXTRA HEAVY GLOBE AND ANGLE VALVES. C-414 and C-415.

EATTIA TIERT		- / 11 -	7110				7-4-63116	0-41			
SIZE INCHES	$2\frac{1}{2}$	3	3}	4	4 1/2	5	6	7	8	10	12
SCREWED ENDS EACH	10.50	14.50	18.00	21.00	28.00	32.00	44.00	75.00	85.00	135.00	200.00
FLANGED ENDS EACH	12.50	17.50	21.50	25.00	32.00	36.00	49.00	80.00	91.00	145.00	220.00
DIAMETER OF FLANGES INCHES	7.5	84	9	10	101	11	12	131	15	171	20



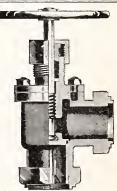
C-430. STEEL STRAIGHT VALVE.

### STEEL VALVES.

TESTED TO 300 POUNDS AIR PRESSURE.

SOFT STEEL SEAT, FOR AMMONIA, NATURAL GAS, ACIDS. ETC.

FOR STEEL FITTINGS, SEE PAGE 44.



C-432. STEEL ANGLE VALVE.

#### STEEL VALVES .- C-430 and C-432.

	1		-											
SIZE INCHES	3	1	3	1	11	11/2	2	$2\frac{1}{2}$	3	3 }	4	41	5	6
STRAIGHT VALVE EACH	4.00	5.95	6.10	7.60	.9.25	11.30	13.65	19.75	24.05	33.85	37.85	46.90	57.50	65.95
STRAIGHT VALVES, WITH COUPLINGS, EACH	5.15	6.75	7.65	9.40	11.60	14.30	17.65	24.90	29.95	41.30	46.75	57.10	68.30	78.35
ANGLE VALVE EACH	4.00	5.00	5.75	6.60	8.35	9.50	11.15	15.40	19.85	26.40	33.55	42.90	51.70	60.50
ANGLE VALVES, WITH COUPLINGS, CACH	5.15	6.20	7.30	8.50	10.75	12.50	15.05	20.55	25.75	33.85	42.35	53.10	62.50	72.90

## SPECIAL IRON-BODY VALVES AND IRON COCKS.



C-438. GLOBE VALVE, PLAIN TOP.



C-439. GLOBE VALVE, YOKE TOP

### ASBESTOS DISC GLOBE AND ANGLE VALVES.

SIZE	INCHES	2	2 1	3	3+	4	5	6	7	8	10	12
SCREWED, PLAIN TOP	EACH EACH				18.50 20.50							
SCREWED, YOKE TOP	EACH	10.00	12 00	16 75	19 50	24.00	40.00	48.00	80.00	90.00	130.00	185.00
FLANGED, YOKE TOP	EACH	11 75	14 00	18 50	21.50	26.00	42.00	50.00	80.00	90.00	130.00	185.00



C-450. ASBESTOS PACKED COCK.



C-451. WITH GLAND.

#### ASBESTOS PACKED IRON COCKS.

SIZE	INCHES	÷	3	1	11	1 ½	2	21/2	3	31	4	5	6
C-450. SCREWED ENDS C-450. FLANGED ENDS C-451 WITH GLAND 3-WAY COCKS	EACH EACH	2 10	2.50	2 50 3 50	3 50 4 75		7.00 12.00	12 00 18.00	18 00 27 00	27 00	30 00	45 00 45 00	

Brass Three-way Cocks can also be furnished. Prices upon application.



C-465. IRON COCK.



C-467, THREE-WAY IRON COCK.

#### IRON COCKS.-C-465.

SIZE	1/2	3	1	114	11/2	2	$2\frac{1}{2}$	3	3 1/2	4	5	6
WITH BRASS PLUG AND WASHER EACH ALL IRON, FLANGED EACH	1.40	1.75	2.15 2.25	$\frac{3.00}{2.75}$	4.15 3.25	5.75 4.25	$9.50 \\ 6.25$	14.00 9.50	29.50 15.00	40.00 19.00	73.00 36.00	45.00 102.00 50.00 108.00

### THREE-WAY IRON COCKS.-C-467.

SIZE INCHES	34	· 1	11/4	1 ½	2	2 1/2	3	3 }	4
ALL IRON EACH WITH BRASS PLUG AND WASHER EACH	1.65	1.80	2.05 3.45	2.65 4.90	3.65 6.75	5.35 10.50	7.50	14.00 32.00	19.00 43.50
ALL IRON, FLANGED EACH WITH BRASS PLUG AND WASHER, FLANGED EACH		3.75	4.25	5.25	7.00	9.00	12.75	20.00	26.00

### IRON COCKS, EXTRA HEAVY, FLAT HEAD, WITH MALLEABLE IRON PLUG.

ì							,	
-	SIZE	s 1	11	1 1	2	$2\frac{1}{2}$	3	4
	EACH	2.50	3.00	4.00	5.00	10.00	13.00	31.00

## IRON COCKS, EXTRA HEAVY.

SIZE INCH	S 1/2	3	1	11	1 }	2	21/2	3	31/2	4	5	6
ALL IRON EA WITH BRASS PLUG AND WASHER EA												62.00 141.00

### THREE-WAY IRON COCKS, EXTRA HEAVY.

SIZE	. INCHES	3	1	11	1 ½	2	2 1	3	31/2	4	5	6
ALL IRON												77.00 154.00

## IRON COCKS, ROUNDWAY, EXTRA HEAVY.

SIZE	5	3
WITH BRASS PLUG AND WASHER	13.50	27.00



472. EXPANSION JOINT, SCREWED ENDS.



C-473. EXPANSION JOINT, FLANGED ENDS.

#### IRON-BODY EXPANSION JOINTS, STANDARD TRAVERSE.

SIZE	. INCHES	2	$2\frac{1}{2}$	3	31/2	4	5	6	7	8	9	10	12
TRAVERSE	. INCHES	$2\frac{1}{2}$	$2\frac{1}{2}$	23	3	31	4	5	6	7	7	7	8
SCREWED ENDS	. EACH	7.00	8.00	10.00	14.00	18.00	38.00	45.00	70.00	100.00	110.00	160.00	225.00
FLANGED ENDS	. EACH	15.00	16.00	18.50	25.00	30.00	48.00	55.00	80.00	110.00	120.00	175.00	250.00
DIAMETER OF FLANGES	. INCHES	6	î	7 ½	81	9	10	11	121	$13\frac{1}{2}$	15	16	19

When used for high-pressure steam, the expansion is 1 inch in 50 feet of pipe.

#### IRON-BODY EXPANSION JOINTS, SPECIAL TRAVERSE.

TRAVERSE	SIZE INCHES	2	₹ 1	3	31/2	4	5	6	7
6 INCHES 10 INCHES 12 INCHES 14 INCHES	SCREWED ENDS . EACH SCREWED ENDS . EACH SCREWED ENDS . EACH SCREWED ENDS . EACH	11.00 16.00 18.50 21.00	13.00 19.00 22.00 25.00	17.50 25.00 29.00 33.00	25.00 35.00 40.00 45.00	30.00 42.00 48.00 54.00	45.00 62.00 70.00 78.00	55.00 80.00 92.50	70.00 100.00 115.00
14 INCHES 16 INCHES	SCREWED ENDS EACH	21.00 23.50	25.00 28.00	33.00 37.00	45.00 50.00	54.00 60.00	78.00 86.00		

Special Traverse Expansion Joints, Flanged Ends, Special.



C-475.
WAINWRIGHT CORRUGATED COPPER EXPANSION JOINTS.

SIZE	INCHES	11	2	21/2	3	3 1	4	4 ½	5	6	7	8	10	12	14
LENGTH OF JOINT LENGTH OF TUBE DIAMETER OF FLANGES C-475	INCHES INCHES INCHES EACH	12 13½ 5 25.00	12 13½ 6 30.00	$12$ $13\frac{1}{2}$ $7$ $35.00$	12 13½ 7½ 40.00	$16 \\ 18 \\ 8\frac{1}{2} \\ 45.00$	16 18 9 50.00	16 18 91 55.00	16 18 10 60.00	18 203 11 75.00	18 203 124 90.00	18 203 131 125.00	24 27½ 16 165 00	24 27½ 19 225.00	30 33 <sup>3</sup> / <sub>4</sub> 21 300 00

This Joint is a combination of the very best copper in the form of corrugated tubing, and strong, fine-grained castron flanges. When these joints are put in according to our directions, we guarantee them to the fullest extent, and stand
eady to make good our claim that this is the only thoroughly satisfactory joint now upon the market. We cannot underake to give general directions which will surely fit every case; we must therefore ask our customers in making inquiries to
abmit all conditions under which joint is to operate.







C-480. SECTIONAL.

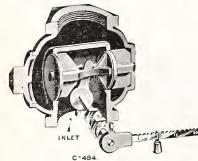


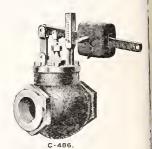
C-482. BACK-PRESSURE VALVE

	DAVIS	NOISE	LESS E	BACK-PE	RESSUR	E VALV	ESC-4	80.		
SIZE	INCHES	2	21	3	31	4	4 }	5	6	2
SCREWED OR FLANGED	EACH	14.00	16.00	18.00	22,00	25.00	30,00	40.00	60.00	80.
SIZE	. INCHES	8	10	12	14	16	18	20	5.5	2.
FLANGED	EACH INCHES	100,00 14	145,00 17	220,00 19	345,00 20	465,00 23	600.00 25	\$50.00 22	900,00 29	1050

### IRON-BODY BACK-PRESSURE VALVES .- C-482.

SIZE INCHE	2	3 }	3	31	4	4}	5	6	î	h	10	13
	11.00 12.75											





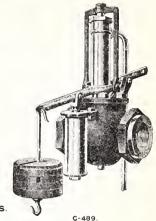
HENNEBOEHLE'S	NOISELESS	BACK-PRESSURE	VALVES.	C-484.	

SIZE INCHES	2 ł	3 4	5	6	7	8	, 10	15	14	16	18
EACH	16.00 1	8,00 26.00	40.00	58.00	18.00	98,00	142.00	215,00	340,00	460.00	590.0

DAVIS'	BALANCE	VALVES.	For	Steam,	Gas,	Air	٥r	Water.	C-486.

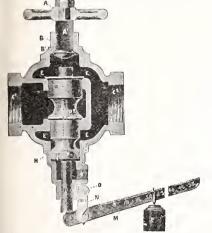
SIZE	INCHES	1	3	1	1 ½	2	2 ½	3	31	4	5	- 6	7	8
BRASS	EACH EACH	5,50	6.50	8 00	$\substack{9.50\\11.00}$	14.00	19.00	25.00	30,00	35,00	45,00	55.00	65.00	75.0





DAVIS PRESSURE REGULATORS. FOR STEAM, AIR OR WATER.

SIZE \_ \_ INCHES  $2\frac{1}{2}$ 10 14 11 20.00[22.00]24.00[25.00]30.00[35.00]40.00[50.00]60.00[75.00]100.00[135.00]175.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[275.00]400.00[27525.0027.0029.0030.0036.0042.0048.0058.0070.0090.00120.00160.00200.00300.00435.00C-489 EACH





PRESSUR

C-492. FOR GENERAL USE.

HENNEBOEHLE'S AUTOMATIC PRESSURE REGULATORS.

oill Inches	1 14	1.2	~ ]	42	э	4	3	6	0	10	14	10
		1	- 1									
ALL BRASS EACH	24.00 30.00	37.00	46.00	60.00								
IRON BODY, BRASS TRIMMINGS _ FACH					75.00	105.00	140.00	185.00	285.00	410.00	510.00	700.00







CURTIS PRESSURE REGULATORS, FOR STEAM, AIR AND WATER.

SIZE INCHES	<del>3</del> 1	1 1	11/2 2	21/2 3	4	5	6	7	8	10	12
C-496, FOR STEAM & AIR EACH C-497, FOR WATER EACH				57.0072.00 57.0072.00							



C-500. SIZES, 12 TO 24-INCH.



C-501. SIZES, 3 AND 4-INCH.



C-502. SIZES, 6 TO 20-INCH.

MUELLER WATER PRESSURE REGULATORS.

SIZE INCHES	1/2	3	I	1‡	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4	6	8	10	12
SCREWED ENDS EACH	10.00	10.00	13.00	17.50	24.00	40.00	55,00	70.00	90.00	150.00	225.00	300.00	400 00

Sizes ½, ½, and i-inch can be furnished for lead pipe connection. Add to list 50 cents.
Flanged connections furnished for either wrought or cast-iron water mains. Any special flanged connections furnishes at a slight additional cost.

### SPECIAL VALVES.



C-505. FISHER REDUCING VALVE.



C-506. FISHER REDUCING VALVE WITH SPRING ATTACHMENT.

#### FISHER REDUCING VALVES .- C-505 and C-506.

SIZE	INCHES	1	11	1 ½	2	21	3	3 ў	4	5	6	8
SCREWED ENDS .	EACH	30.00	35.00		50.00 50.00	58.00 60.00	70.00 75.00	87.50	100.00	125.00	150.00	225.00



#### FISHER STEAM PUMP GOVERNOR .- C-507.

# FOR WATER WORKS, HYDRAULIC ELEVATORS, BOILER FEED PUMPS AND ALL PUMPS WORKING UNDER PRESSURE.

SIZE INCHES	1/2	3-1	1	11/4	1 ½	2	21/2
SCREWED ENDS EACH FLANGED ENDS EACH	25.00	27.50	30.00	35.00	42.50 45.00	50.00 50.00	58.00 60.00
SIZE INCHES	3	31/2	4	5	6	8	
SCREWED ENDS EACH FLANGED ENDS EACH	70.00 75.00	87.50	100.00	125.00	150.00	225.00	

With Flanged Valves we furnish Companion Flanges, Bolts and Gaskets complete.

When ordering Governors, give us the size of your steam pipe and also the maximum and minimum steam and water pressure, at ordinary and special duty.

CLAIMS: Simple in construction; strong and durable; cannot get out of order; works automatically; requires no attention; saves valuable machinery; saves labor; saves coal; guaranteed to change speed of engine on a variation of two pounds pressure in the main; is very sensitive, yet positive in its action; positively prevents over-pressure; avoids shock or jar or water ram; saves bursting mains or hose; relieves the engineer of the constant care of the throttle; an ornament to the engine room; invaluable for safety and economy; has no equal.





C-525. BLOW-OFF VALVE.

# IRON-BODY THROTTLE VALVES.-C-520.

SIZE INCHES	2	21	3	3½	4	41	5	6	8
FOR MEDIUM PRESSURE EACH FOR HIGH PRESSURE EACH	7.00 13.00	12.00 16.00	15.00 20.00		21.00 30.00		30,00 35,00	35,00 40,00	65,00

These Valves never re-seat twice in succession in the same place; every time the lever is moved the dises revolve. The insures their being perfectly tight and adds to the life of the valve.

#### IRON-BODY BLOW-OFF VALVES .- C-525.

SIZE	2	21	3
SCREWED . EACH FLANGED . EACH	15.00	20.00	30.00
	15.00	20.00	30.00

Suitable for steam pressure up to 250 pounds.

Well-known engineers, of the highest standing, regard this valve as being superior to any blow-off valve ever devised. It can be quickly taken apart and easily repaired at a very trifling expense.

It can be opened and closed as often as required, without danger of choking or cloggiug.



C-530. FOOT VALVE, SCREWED ENDS.



C-531. FOOT VALVE, FLANGED.

# IRON FOOT VALVES AND STRAINERS.-C-530 and C-531.

SIZE INCHES	1	1	11/4	11/2	2	2 ½	3	3 1/2	4	4 ½	5	6	7	8	10	12
SCREWED EACH FLANGED EACH	1.15	1.30	1.40	1.90	2.40 3.50	3.30 4.50	3.90 5.75	5.60 7.50	7.30 9.50	10.50 13.00	11.25 14.00	14.75 17.50	35.00 38.00	41.00 45.00	64.00 70.00	100,00 112,00





C-536. FLOAT VALVE.

# ENTERPRISE FLOAT VALVE.-C-536. FOR CITY AND RAILROAD WATER SERVICE

SIZE	INCHES	4	5	6	ĩ	8
SCREWED	EACH	22,00 25,00	32.00 36.00	45.00 50.00	60.00 65.00	75.00 80.00

In cultroad service the water tanks are frequently overrun or flooded through the neglect of pumping engineer to close down at the moment when the tank is full, thereby causing damage through the wetting of frost proofing, and weakening and washing out of foundations. This is liable to occur even when the pump is adjacent to the tank and is doubly so when it is at a distance.

It is found desirable to have locomotives supplied from running streams, on account of the water containing less lime, magnesia and other substances which are found in well water and which deposit scale on boilers and flues. To obtain this water, pumps are frequently located at a considerable distance from the tank and the water forced to it by steam or wind mill power. Obstructions often intervene, making it impossible to see a visible gauge board at the tank, and reliance is placed

on a pressure-indicating gauge at the pump.

In all such cases, which depend on the watchfulness of the pumping engineer, accidents are liable to occur and the tank be flooded. By use of the Enterprise Float Valve this is avoided. The valve is placed on the inlet pipe in the tank; the float adjusted to proper highly, and when the water reaches a given level it will close the valve automatically, either stapping the pump through equalizing the pressure, or opening a relief valve at the pump and thereby notifying the engineer that the tank is full and that he should shut down. Many of the most important railroad systems are equipping their water stations with the Enterprise Float Valve.

City water works employing stand pipes or tanks are subject to the same liability of flooding as are railroad water stations. The stand pipe or tank is located on the highest ground in the vicinity in order to increase the pressure; often being at a considerable distance from the pump, with buildings, trees or other obstructions between. The pressure gauge gets out of order, the engineer becomes careless, the water overflows and the foundations are weakened or destroyed. In using the Float Valvo in such cases the discharge of water into the tank or stand pipe is automatically controlled and the inlet pipe closed when the water reaches the proper height.

This is the only Float Valve which opens with the flow and will close against steam pump pressure.

#### ENTERPRISE FLUSH VALVE .- C-538.

E			 		 	 		
I	SIZE	3-INCH			 	 	EACH	17.00

The Enterprise Flash Valve has many of the features employed in the construction of the Enterprise Patent Float Valve, and, like it, is intended to accomplish results not obtainable by other styles of valve. The operating lever is pivoted in the arch directly over the valve and the parts are so arranged that the greatest leverage is obtained during the initial movement in opening, that being the time when the pressure on the valve is greatest. As the valve opens, the link connection lifts the valve rapidly until wide open, when it offers perfect freedom of discharge.

\* Finsh Valve. The body of the valve is cut away at all points except where the arch ends attach, and being thus on a level or below the tank bottom, offers no obstruction to flushing the tank. All sediment can consequently be quickly and

casily removed.

Drenching Valve. Railway tanks situated adjacent to the tracks can be advantageously fitted with this valve and used for dreaching curs of stock during hot weather, the body of the valve being threaded for pipe connection for that purpose. The superiority of this arrangement over the common practice of a pipe connection with the tank bottom and a globe valve ent off below, is obvious. The globe valve and pipe freeze up and burst in cold weather, while the Enterprise Valve, being located in the tank, and the discharge pipe when not in use being empty and dry, is unaffected by freezing.



#### TANK FLOAT VALVES .- C-540

SIZE INC	HES	3	1	i.	11	2
EACH		1.25	1.40	1.50	3.00	5.00





D-1. BRASS, 2-INCH AND SMALLER.

D-2. BRASS, 2%-INCH AND LARGER.

#### EDDY BRASS GATE VALVES.-D-1 and D-2.

SIZE	INCHES	‡	8	1/2	$\frac{3}{4}$	1	11	15	2	5 1	3	3 ½	4	5	6	8
SCREWED ENDS .	_ EACH	1.30	1.30	1.30	1.70	2.20	3.20	4.20	6.20	11.50	16.00	22.00	35,00	50,00	\$0.00	130.00
FLANGED ENDS .	_ EACH								9.00	15.00	20.00	28.00	42.00	60.00	90.00	130.00







D-5. QUICK-OPENING VALVE. D-7. HOSE VALVE, WITH CAP AND CHAIN D-8. WITHOUT CAP AND CHAIN.

# EDDY BRASS QUICK-OPENING GATE VALVES .- D-5.

SIZE INCHES	3	1	1‡	1.1	5	21	3	34	4	5	G	8
SCREWED ENDS EACH											\$5.00 95.00	

#### "EDDY BRASS HOSE GATE VALVES .- D-7 and D-8.

SIZE	2	21/2	3
WITH BRASS CAP AND CHAIN . EACH WITH IRON CAP AND CHAIN . EACH WITHOUT CAP AND CHAIN . EACH	7.60	13.00	17.80
	7.00	12.40	17.00
	-6.20	11.50	16.00

These Valves have one male end to fit hose coupling, and one female end to fit wrought-iron pipe. Always send a hose coupling for male end. Specify whether iron or brass cap is wanted. If not specified, we send without cap.
Eddy Valves are all double-faced, and constructed with two loose Gates, each perfectly independent of the other.

\*For Single Gate Hose Valves, see page 79.



D-12. 7-INCH AND SMALLER.



D-13. B-INCH AND LARGER.



D-14. FLANGED END

# EDDY IRON-BODY, BRASS MOUNTED GATE VALVES, SCREWED ENDS.-D-12 and D-13.

SIZE INCHES	2	21	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5	6	~	8	10	12
MEASUREMENT END TO END . INCHES VEIGHT POUNDS			13.00 74 40	$16.50$ $7\frac{1}{2}$ $50$	18.00 8 75	22.00 8½ 100	$25.00 \\ 9 \\ 125$	$31.00 \\ 104 \\ 175$	37.00 11 200	$\frac{45.00}{11} \\ 270$	60.00 131 415	80.60 144 600

# EDDY IRON-BODY, BRASS MOUNTED GATE VALVES, FLANGED ENDS .- D-14.

			24	3	3 ½	4	4 ½	5	6	7	8	10
LACH		7.00				18.00	22.00	25.00	31.00	37.00	45.00	60,00
SIZE .				15	16	18	20	22	24	30	36	
EACH	 	80.00	120.00	135.00	150.00	190.00	240.00	320.00	400.00	700.00	1200.00	

#### DIMENSIONS AND WEIGHTS .- D-14.

SIZE	INCHES	2	21	3	31	4	4.1	5	6	7	8
FACE TO FACE		53	61	7.3	73	7.3	81	9}	93	11	11
DIAMETER OF FLANGES		tj	7	7.5	81	9	91	10	11	124	133
NUMBER OF BOLTS .		4	4	4	4	4	8	8	8	8	8
DIAMETER OF BOLTS		8	- 5	3	3	1	. 3	3	1	3	3
DIAMETER OF BOLT_CIRCLE		13	51/2	6	7	7-5	2.3	84	91	103	113
WEIGHT	POUNDS	53	38	50	55	7.5	100	125	175	200	270
SIZE	INCHES	10	12	14	15	16	18	50	24	30	36
FACE TO FACE		12	131	15	15	161	161	173	20	224	253
DIAMETER OF FLANGES		16	19	21	221	231	2.5	274	35	383	453
NUMBER OF BOLTS		12	12	12	16	16	16	20	20	28	32
DIAMETER OF BOLTS			1	1	1	1	1 1	1 1	11	13	13
DIAMETER OF BOLT CIRCLE .		141	17	183	20	211	553	2.5	291	36	423
WEIGHT	POUNDS	415	580	708	948	13500	1100	1400	2410	4030	7800

Eddy Valves with Compound Stem, as shown on page 114, same list as Regular Valves, but different discount.



DIMENSIONS OF QUICK-OPENING AND OUTSIDE STEM AND YOKE VALVES SAME AS LISTED ON PAGE 1D3.



D-18. QUICK-OPENING GATE VALVE.

D-20. OUTSIDE STEM AND YOKE VAL

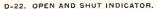
QUICK-OPENING GATE VALVES, SCREWED OR FLANGED ENDS.-D-18.

SIZE INCHES	2	2‡	3	3 1/2	4	4.1	5	6	7	8	10	12
IRON BODY, BRASS MOUNTED, EACH ALL IRON EACH	8.20 7.50	11.80 10.75	14.40 13.10	18.00 16.35	19.70 17.90	23.80 21.60	$\frac{27,00}{24.50}$	33,30 30,20	39.70 36.00	$\frac{48,00}{43.50}$	63.50 57.50	84.4

# OUTSIDE STEM AND YOKE VALVES, IRON BODY, BRASS MOUNTED .- D-20.

ı			,		-									7		
	SIZE	INCHES	2	21/2	3	31/2	4	4 }	5	6	7	8	10	12	16	20
	SCREWED OR FLANGED ENDS	. EACH	1.00	10.50	13 00	16.50	18.00	22.00	25,00	31.00	37.00	45,00	60,00	80.00	150,00	240.







D-24. NEEDLE AND SLOT INDICATOR.

INDICATOR VALVES .- D-22 and D-24.

SIZE	INCHE	s 2½	3	3 1	4	4 ½	5	6	7	8	10	12	14	16	18
SCREWED ENDS FLANGED ENDS	EAC	10.50	13.00 13.00	16.50 16.50	18.00 18.00	$\frac{22.00}{22.00}$	25.00 25.00	31,00 31.00	37.00 37.00	45.00 45.00	60,00 60,00	80,00 80,00	120,00	150.00	190.







All Water Gates will be shipped made to open to the right unless open to left is specially ordered.

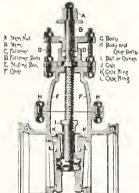
D-28. HUB ENDS

D-29. SPIGOT ENDS

#### EDDY IRON-BODY, BRASS MOUNTED GATE VALVES, HUB ENDS.-D-28.

IZE INCHES	2	3	4	6	8	10	12	14	16	18	20	24	30	36
ACH	10.00 7½ 2¼ 20	15.00 10½ 3 45	18 00 12 3½ 110	31 00 13½ 3§ 175	45.00 141 34 300	60.00 15½ 4 450	80.00 16 41 600	$120.00 \\ 17\frac{1}{4} \\ 4\frac{1}{2} \\ 675$	150.00 173 41 950 1300 G	$190.00 \\ 18 \\ 4\frac{1}{2} \\ 1100$	$240.00$ $19\frac{1}{2}$ $\frac{1}{2}$ $1535$	400.00 22 5½	$700.00 \\ 25 \\ 6 \\ 4800$	$   \begin{array}{c}     1200.00 \\     31\frac{1}{2} \\     7\frac{1}{2} \\     7800   \end{array} $

Spigot Valves or Valves with hub and spigot farmished at same list as Hub Valves, but at a different discount, and are y furnished to order and not carried in stock.



Prices on Valves 40 to 72 inches inclusive furnished upon application. An extra charge is made where Valves are required arranged with indicator.

List price given above includes

gearing on smaller sizes an extra

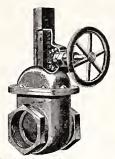
ring on sizes 24-inch and larger.

rge is made. By-Pass Valves extra.

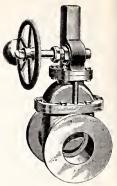
SECTIONAL EDDY GATE VALVE.

This Valve is constructed with double gates: each gate is perfectly independent of the other. Its durability is, there, double that of a single gate vaive. The seats are made diverted so that the Valve is relieved of pressure as soon as it is htly opened. The pressure from the carrier is upon the center of the back of each of the gates, and as the gates are free djust themselves to the seats on account of the recesses upon the back of each of them, and the rounded surfaces of the ier which fit into them, their seating is always perfect. We would expressly call attention to the three working moved ts—the carrier and the two gates. The letters of reference show the various parts of the Valve.

# EDDY SPECIAL VALVES.



D-33. 3-INCH AND SMALLER.



D-34. 4-INCH AND LARGER

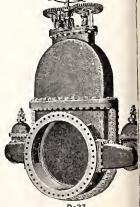
# RACK AND PINION QUICK-OPENING VALVES.-D-33 and D-34.

SIZE INCHES	1.}	1 ½	2	21/2	3	31	4	5	6	7	8	10	12	
ALL BRASS EACH														
SCREWED ENDS . EACH FLANGED ENDS . EACH			9.00	14.00	$  17.00 \\ 17.00 $	21.00	25.00 25.00	31.00 31.00	37.00		55.00			200
			10.00		20.00		30.00		40.00		55,00	'		

Prices on sizes larger than 16-inch furnished upon application.



D-36. GEARED TO SET HORIZONTAL, AND MADE WITH SINGLE BY-PASS VALVE



D-37.
48-INCH VALVE GEARED TO STAN
UPRIGHT, WITH DOUBLE
BY-PASS VALVES.

We are prepared to furnish Valves in all sizes, from ‡-inch to 72-inch inclusive.

Eddy Valves are all double-faced and constructed with two loose gates, each perfectly independent of the off

# EDDY SPECIAL GATE VALVES.



SUITABLE FOR A WORKING PRESSURE OF 750 POUNDS.

TESTED AT 2,000 POUNDS
PRESSURE PER SQUARE INCH,
WATER PRESSURE.

D-42. FOR EXTREME HEAVY PRESSURE.

# EDDY HYDRAULIC GATE VALVES, IRON BODY WITH BRONZE MOUNTINGS.

ZE INCHES	2 }	3	4	5	6
CREWED ENDS EACH LANGED ENDS EACH	28.50 29.00	30.00 32.50	67.00 77.00	125.00	160.00

Companion Flanges bolted on, extra.

The Eddy Hydraulic Gate Valve is intended for natural gas, oil, and hydraulic work. Special care and inspection is nevery valve to insure its being perfect before leaving the factory. Can be furnished all Iron when so ordered.



SUITABLE FOR A WORKING PRESSURE OF 250 POUNDS.



D-44. 2-INCH AND SMALLER.

D-45. 2%-INCH AND LARGER, FLANGED.

#### EDDY ALL BRONZE GATE VALVES,-D-44 and D-45.

IZE INCHES	1/2	3	1	11	1 ½	2	21	3	3½	4	5	6
CREWED ENDS EACH LANGED ENDS EACH	5 25	6.25	10.00	12.00	14.50	23.00	27,50	40,00	55.00	70.00	90.00	140.00
	8 75	10.50	14.00	17.50	21.00	27.00	30.00	45.00	65.00	85.00	110.00	155.00

For high pressures and endurance these Valves have no equal. The metal used is equal to that specified for Government rine work; its tensile and traverse strength is soperior to that used in any other make of valve.

# EDDY EXTRA HEAVY VALVES.







D-51. EXTRA HEAVY, WITH BY-PASS



D-52. HIGH-PRESSURE VAL

# EDDY EXTRA HEAVY GATE VALVES. SUITABLE FOR A WORKING PRESSURE OF 125 POUNDS.

SIZE	INCHES	2	$2\frac{1}{2}$	3	31/2	4	4 1/2	5	6	7	8	10	1
STATIONARY STEM												92.00 193.50 16 163	

Stems of bronze, unless otherwise ordered. These Valves are tested to 350 pounds per square inch. We recomid the use of by-passes on Valves 10-inch and larger. Valves larger than 12-inch can be furnished.

# EDDY HIGH-PRESSURE GATE VALVES. SUITABLE FOR A WORKING PRESSURE OF 250 POUNDS.

SIZE	INCHES	2	$2\frac{1}{2}$	3	31/2	4	41	5	6	7	8	10	1
STATIONARY STEM											97.00		
OUTSIDE STEM AND YOKE	INCHES		74	. 9	9	10		11	13	14	15	171	188
FACE TO FACE OF FLANGES	INCHES		9 <del>1</del>	101	113	12		15	15%	161	16½ 20å	18	1 2

Bronze or steel stems used, as preferred, but brouze will be furnished unless otherwise ordered. These Valves tested to 500 pounds per square inch. We recommend the use of by-passes on Valves 8-inch and larger.

#### BRASS BY-PASSES, COMPLETE, ATTACHED TO VALVES.

SIZE OF VALVES	INCHES	11	11/2
FOR EXTRA HEAVY VALVES	. EACH	16.25 21.25	18.75 24.00

Eddy Extra Heavy and High-Pressure Valves are constructed with removable seats that have double joints to predict the possibility of leaking between the valve body and the back of the rings. The case and gate rings are of bronze; is case rings are heavy to permit their being unscrewed from the body, and the gate rings are ground to them, so that they a again be replaced in the valve. The Steins are of Rolled Tobin Bronze.



# AMERICAN GATE VALVES.

PARALLEL DISCS-COMPOUND WEDGE.



TE BRASS GATE VALVE

D-76. BRASS SERVICE GATE VALVE.

#### AMERICAN BRASS GATE VALVES .- D.75.

ZE	inches	į.	å	1	1‡	11/2	2	21/2	3
ACH		1.30	1.75	2.50	3.50		7.50	15.00	22.00

#### AMERICAN BRASS SERVICE GATE VALVES .- D-76.

IZE INCHES	1/2	3	1	1‡	11	2	21/2	3
ACH EACH	1.65	2.00 3.00	2.75 3.75	4.00 5.10	5.50 7.75	8.50 11.50	17.00 23.00	25.00 33.75



D-78. 7-INCH AND SMALLER.



D-79. 6-INCH AND LARGER.



D-80. FLANGE ENDS.

# AMERICAN IRON-BODY BRASS MOUNTED GATE VALVES .- D-78, D-79, and D-80.

SIZE IN	CHES 2	21/2	3	31/2	4	$4\frac{1}{2}$	5	6	7	8	10	12	14	16
SCREWED ENDS . FLANGED ENDS .	EACH 7.50 EACH 7.50	12.00 12.00	15.00 15.00	18.00 18.00	$\frac{20.00}{20.00}$	22.50 22.50	25.00 25.00	30.00 30.00	$\frac{40.00}{40.00}$	50.00 50.00	70.00 70.00	97.50 97.50	141.00	178.00

# WEIGHTS AND DIMENSIONS AMERICAN IRON-BODY GATE VALVES.

SIZE OF VALVE INCHES	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	41/2	5	6	7	8	10	12	14	16	18	20	24	30
DIAMETER DF FLANGES IN. FACE TO FACE OF FLANGES IN. END TO END, SCREW SOCKETS IN. WEIGHT, SCREWED ENDS LES. WEIGHT, FLANGED ENDS LES.	6 53 6 16 22	7 6½ 6 22 26	7½ 7½ 7½ 38 40	8½ 7¾ 7½ 45 50	9 71 8 66 70	9½ 8½ 8½ 8½	10 91 9 90 96	11 92 101 118 118 140	160	13½ 11 11 245 245	16 10½ 11½ 290 290	19 128 370 370	21 12 <del>1</del> 550	23½ 13⅓ 775	25 14	27½ 14½	32 16	384 161

American Valves with Single Gate, as shown in Sectional, page 113, same list as Double Gate Valves, but different discount.

# AMERICAN GATE VALVES.



AMERICAN IRON-BODY, BRASS MOUNTED GATE VALVES, HUB ENDS.-D-85.

SIZE INCHES	2	3	4	6	8	10	12	14	16	18	20	24	30	96
EACH	10.00	15.00	20.00	30.00	50.00	70.00	97.50	141.00	178.00	222.00	285.00	475.00	870.00	1425
	74	9½	103	11‡	121	131	13‡	144	15	148	16½	151	194	19
	28	3	3	3	31	31	4	4	4	44	4¼	41	42	5
	22	40	80	140	240	325	415	575	800	900	1150	1575	3000	394



D-88. SCREWED ENDS.



D-89. FLANGED ENDS.



D-90. HUB ENDS.

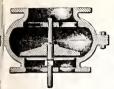
AMERICAN ALL-IRON GATE VALVES.—D-88 and D-89. FOR GAS, AMMONIA, ETC.

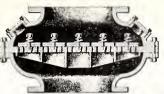
SIZE INCHES	2	21/2	3	31/2	4	41/2	5	6	7	8	9	10	12
SCREWED OR FLANGED ENDS EACH	7.20	9.60	12.00	14.00	16.00	18.00	20.00	24.00	32.00	40.00	48.00	55.00	75.00

AMERICAN ALL-IRON GATE VALVES, HUB ENDS.-D-90.

BIZE INCHES	2	3	4	6	8	10	12	14	16
EACH	7.00	12.00	16.00	24.00	40.00	55.00	75.00	130.00	165.00

American Valves with Single Gate, as shown in Sectional, page 113, same list as Double Gate Valves, bu different discount.







35. 8-INCH AND SMALLER.

D-96. 1D-INCH AND LARGER.

D-97. HORIZONTAL CHECK VALVE

#### VERTICAL CHECK VALVES .- D-95 and D-96.

IZE	5	$5^{\frac{1}{4}}$	3	31/2	4	5	6	7	8	10
CREW SOCKET EACH	7.50	8.00	12.70	14.25	16.50	22.50	29.00	32.50	37.00	83.50
LANGE END EACH	8.00	8.50	12.70	14.25	16.50	22.00	28.00	31.50	36.50	83.50
TUB END EACH	8.00		12.70		16.50	22.00	30.00	35.00	39 00	85.50
HAMETER OF FLANGES INCHES	6	7	74	84	9	10	11	$12\frac{1}{2}$	134	16
ACE TO FACE OF FLANGES INCHES	51	58	6	7	7.5	91	103	103	$10\frac{3}{4}$	13
IND TO END OF SCREW SOCKET . INCHES	71	7 1	88	94	103	124	134	$13\frac{3}{4}$	141	151
IND TO END OF HUBS INCHES	9		113		124	161	18		194	20
DEPTH OF HUB INCHES	24		3		3	31	31		34	4
JIZE INCHES	12		14	16		18	20	24		30
CREW SOCKET EACH	108.6	00						1		
LANGE END EACH	108.0	13	50.00	200.00	240	0.00	275.00	420.	.00	800.00
TUB END EACH	110.0	00 13	52.00	203.00	24:	3.00	278.00	425.	.00	810.00
DIAMETER OF FLANGES INCHES	19		21	$23\frac{1}{2}$		25	271	32		383
FACE TO FACE OF FLANGES INCHES	144		181	18}		21	221	24	l d	$28\frac{1}{2}$
ENO TO END OF HUBS INCHES	211		254	$27\frac{1}{2}$		29	32 <del> j</del>	35	j. <u>į</u>	41
DEPTH OF HUB INCHES	41		41	41		41	43	5	; <u>i</u>	53

# HORIZONTAL CHECK VALVES, IRON BODY, BRASS MOUNTED.-D-97.

" LIST A

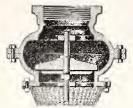
SIZE INCHES	21/2	3	3 ½	4	5	6	7	8	10	12
SCREW SOCKET EACH	7.75	9 75	14.50	20.50	25.50	31.00	37.00	44.50	77.50	97 00
FLANGE END EACH	10.00	11.00	15.50	21.50	27.00	32.50	38.50	46.00	26.50	95 00
HUB END EACH		10.25		20.50	25.00	28.50		43.00	73.00	92.00
DIAMETER OF FLANGES INCHES	7	73	84	9	10	. 11	124	$13\frac{1}{2}$	16	19
FACE TO FACE OF FLANGES INCHES	84	104	9 <u>i</u>	114	131	17	17	173	23	244
END TO END OF SCREW SOCKET INCHES	78	9	9 <u>1</u>	10	131	14	161	163		
END TO END OF HUBS INCHES		13		15	19∄	173		19	243	271
DEPTH OF HUB INCHES		3		3	31	31		$3\frac{1}{2}$	4	4

LIST B

SIZE INCHES	14	16	18	20	24	30	36
FLANGE END . EACH HUB END . EACH DIAMETER OF FLANGES . INCHES	150.00 146.00 21	165.00 160.00 231	230.00 225.00 25	285.00 280.00 27½	400.00 390.00 32	1200.00 1120.00 38‡	1890.00 1825.00 45\$
FACE TO FACE OF FLANGES INCHES END TO END OF HUBS INCHES DEPTH OF HUB INCHES	26½ 30 4	301 321 4	$\frac{32\frac{1}{2}}{37}$	35½ 40 44	. 40 41 1 41	56 68 51	67 78 5 <del>1</del>

Sizes 16-inch and under, made with Single Flap; 18 to 21-inch, inclusive, with Secondary or Rehef Flap; 30-inch and larger, with Plate and Multiple Flaps. Sizes 14-inch and larger, with Plate and Multiple Flaps.

# EDDY FOOT VALVES.



D-100. 8-INCH AND SMALLER, SCREWED END



D-101. 8-INCH AND SMALLER, FLANGED END.

# VERTICAL FOOT VALVES, 8-INCH AND SMALLER .- D-100 and D-101.

SIZE INCHES	5	21	3	3 <del>į</del>	4	5	6	7	8
SCREWED END EACH FLANGED END EACH HUB END EACH		12 00 12 25		18.50 18.50	20,00 20,00	26.25 25.75	33 00 32.50 33.25	38.50 38.00	44.7 43.5 46.5

The above Valves are bronze-mounted, with rubber-faced gate, and copper basket screen.



D-105. FOOT VALVE, 10-INCH AND LARGER.

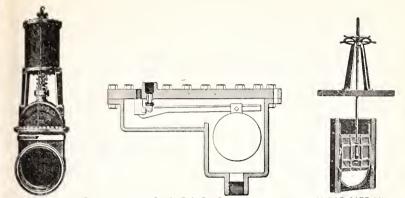


D-105. SECTIONAL, 10-INCH AND LARGER.

# VERTICAL FOOT VALVES, 10-INCH AND LARGER.-D-105.

SIZE INCHI	s 10	12	.14	16	18	20	24	30	36
FLANGED END EAC	92.50 92.50 94.50	123.00	165.00	220.00	270.00	330.00	500.00	850.00	

The above Valves are bronze-mounted, with rubber-faced gate, and flat copper screen. Prices on sizes larger than 36-inch furnished upon application.



-110. HYDRAULIC VALVE.

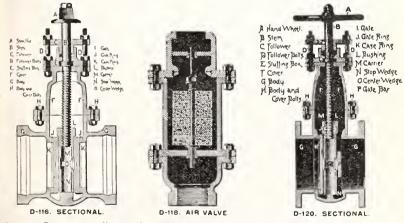
D-112. FLOAT AIR VALVE.

D-114. SLUICE-GATE AND STAND.

HYDRAULIC VALVES, -D-110: This shows a Valve arranged with hydraulic operating cylinder, so that a Valve located a distance may be opened or closed by admitting water to operate the piston in the cylinder. Prices upon application.

FLOAT AIR VALVES .- D-112: This Valve is designed for use in summits of pipe lines where the air accumulates. hen the air takes the place of the water, the float drops, carrying the Valve away from its seat and permitting the air to cape. When the water cuters the Valve, the float rising causes the Valve to close the air vent, preventing any more water om escaping. Price upon application.

SLUICE-GATES, -D-114: These Gates are intended for use where there is but light or medium pressure. Our regular stes are made with round openings, but are made square if so desired. It is necessary to have full details and requirements efore price can be given.



AMERICAN PARALLEL SEAT VALVES .- D-116: Sizes and list prices, pages 109 and 110.

AIR VALVES .- D-118: This Valve is made with either flanged, spigot, screw socket, or hub ends, as required. It is nsed for permitting any air to escape from the pipe when the water is drawn from it. When the pipe is full of water the eork underneath the Valve floats the valve to its seat, preventing any water escaping. Prices upon application.

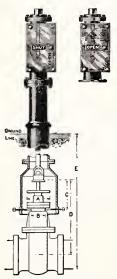
AMERICAN SINGLE-GATE VALVES. -D-120: Sizes and list prices same as on American Parallel Scat Valves, pages 109 and 110, but greater discount.





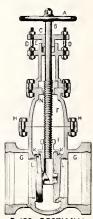
D-131. FLOOR STAND

These Floor Stands are made plain, as shown above, or provided with graduated scale to indicate the position of valve gates in valve to which they are attached. They are also made in different sizes and styles of finish, as required.



D-135. VALVE INDICATOR POST.

For each 6 inches increase or decrease . . . .



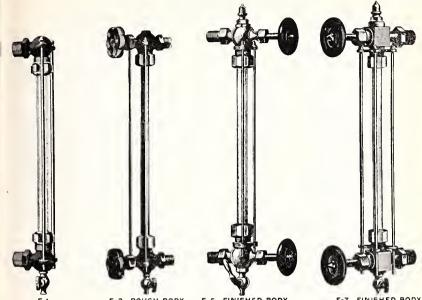
D-138. SECTIONAL.
EDDY VALVE, WITH COMPOUND SCREW.

This design is for use where it is desirable to ha a Valve arranged so that it can be opened or closquickly. The compounding of the screw doubles t rapidity of operation.

In ordering Indicator Posts, state depth of trench, size of valve, and whether valve opens by turning to the rig or to the left.

1.00



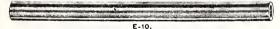


E-3. ROUGH BODY. E-5. FINISHED BODY.

E-7. FINISHED BODY.

	WATER GAUGES.												
FIGURE	E-1	E-3	E-3	E-3	E-5	E-5	E-7	E-7					
THREADED FOR PIPE DIAMETER OF GLASS LENGTH OF GLASS EACH	12 2.60	38 9 10 2.75	12 3 00	3 3 16 4.50	12 4.25	16 5 50	12 6 00	3 3 16 8.00					

Extra Brass Guards, net, each: 12-in., 7c.; 14-in., 8c.; 16-in., 12c.; 18-in., 15c.



SCOTCH GLASS TUBES.

LENGTH INCHES	10	11	12	13	14	15	16	17	18	19	20	2.5	24	30	36	48	60
%-INCH . EACH	.25 .30 .51	.27 33 .56	.30 .36 .61	.32 .40 66	.35 .43 .71	.37 .46 .76	.40 .49 81	.52 .86	.45 .55 91	.47 .59 .96	.50 .62 1 01	.55 .68 1.12	.60 74 1 22	.75 .93 1.52	1.12	1 21 1.50 2 43	1.51 1.88 3.04

Sizes over 24 inches long, Special Discount. Glasses up to 10 feet long carried in stock.

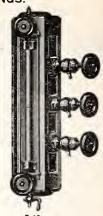
#### RED-REFLECTING GAUGE GLASSES.

Showing through the water a broad line of a rich red color, thus reudering it very distinct. Height of water in boiler can be seen instantly, and as plainly by night as by day. List price, 50 per cent, added to regular Scotch Glass list.

CHESTERTON'S GLASS TUBE CUTTERS, EACH, \$2.00.

# ENGINE AND BOILER TRIMMINGS.





WATER GAUGE COLUMNS.-E-13. WITHOUT TRIMMINGS.

NUMBER	1	2	3	4	5	6
LENGTH INCHES SIZE OF BOILER CONNECTIONS SIZE WATER GAUGE CONNECTIONS CENTER TO CENTER, WATER GAUGE CONNECTIONS SIZE GAUGE COCK HOLES	10	15 12 12 1 50	18 11 15 15 2 50	22 11 18 18	20 1½ 4 14 3 00	28 11 22 5 50

# WATER GAUGE COLUMNS.-E-16. WITH TRIMMINGS, AS FOLLOWS:

WATER GAUGE, STEAM GAUGE AND SIPHON, AND STUFFING-BOX GAUGE COCKS.

NUMBER	1	2	3	4	5	6
SIZE OF GAUGE COCKS.	ş 5	5 ± 5	1 1 2 5 5	6	6	6
WITH IRON CASE STEAM GAUGE EACH	22 00	26.00	29.00	50.00	50.00	57.00



E-19. WITHOUT STUFFING-BOX.



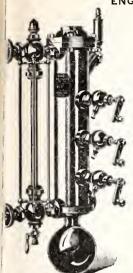
E-22. WITH STUFFING-BOX.



E-25. REGESTER GAUGE COCK.

#### GAUGE COCKS.

SIZE	9	1/2	ã
E-19, WOOD HANDLE	1.10	1.20	1.35
	1.35	1.50	1.70
	1.00	1.00	1.00

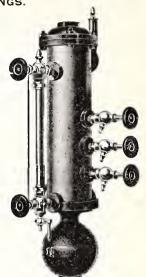


-30. GOVERNMENT COLUMN.

# ENGINE AND BOILER TRIMMINGS.

#### The Value of Steady Water.

The value of steady water cannot be over estimated. It is evidenced in low repair bills, greater durability for the boilers, less waste of fuel, and steady power, and we recommend the high and low water alarm for all places for which it is intended. Care should be taken to get columns with proper variation between the alarms which are represented by the extreme gauge cocks. It is a mistake to select columns of too little variation as they are likely to be annoying. Further-more, the effect of a high and low water alarm is to always cause the attendant to earry the water steadily at the center gauge cock for reasons that are obvious, and a column with small variation is therefore not necessary to secure the desired result.



E-31. NO. 11/2 COLUMN.

# RELIANCE SAFETY WATER COLUMNS.

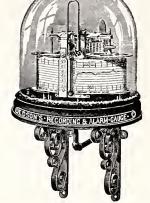
Com	bined High an	d Low	Water A	larnıs.				Gene	ral Dir	nension	18.			
Blae of Column.	Kind and filte of Boller	Variation Between Alarma.	List Price of Columns.	List Price of Water Bauge and Onuge Cocks.	Steam and Water Connections.	Blow-off.	Water Gauge.	Gauge Glass.	Gauge Cocks, Centers.	Gauge Cocks. Size.	Center of Water Connection to Top of Column.	Diameter of Column.	Length over all	Size of Column.
No.	In.	In.			In.	In.	In.	In.	In.	In.	In.	In.	In.	
1 1½ 5 7 9 11 13 15	36 to 54 36 to 54 54 to 72 Water Tube Vertical Vertical Vertical	6 8 12 18 24 30 36	28.00 28.00 30.00 35.00 40.00 42.50 45.00 50.00	7.00 7.00 10.00 10.00 10.00 12.50 *20.00 *20.00	1 11 11 11 11 11 11 11 11 11	1 1 1 1	1x14 1x14 2x18 2x21 2x261 2x321 2x381 2x441	\$x12 \$x12 \$x16 \$x16 \$x19 \$x24 \$x30 *\$x36	3 4 6 9 12 10 12	न्हा न्हा हान खंन हान होन होन होन होन	$\begin{array}{c} 16 \\ 19\frac{3}{4} \\ 20\frac{1}{2} \\ 26 \\ 33\frac{1}{2} \\ 46\frac{1}{2} \\ 52\frac{1}{2} \\ 58\frac{1}{2} \end{array}$	3 <sup>3</sup> 4 5 4 <sup>1</sup> + 5 <sup>1</sup> 4 5 5 5 5	231 281 291 36 44 58 64 70	1 1½ * 5 7 9 11 13 15
	Low Wa	ster Ala	rms.					Gene	ral Din	iension	8.			
6 8	36 to 54 In. 54 to 72 In. Water Tube		25.00 28.00 35.00	7.00 10.00 10.00	1 1 1 1 1 1 1 1 2	22 24 24	½x14 ¾x16 ¾x21	\$x12 \$x14 \$x14	3 4 6	1 2 3 4 3 4	$   \begin{array}{c c}     16 \\     184 \\     26   \end{array} $	34 41 51	23± 27± 36	2 6 8

<sup>\*</sup>Two glasses joined at center with stuffing box. Four gauge cocks.

Note. In ordering never fail to state whether the gange cocks should be at the right or left of the water gauge. Columns with the cocks at the right of the water gauge are right hand columns, and those with the cocks at the left of the rater gauge are left hand columns. The columns shown above are right hand columns. Larger sizes made to order. Seware of substitutes.

#### ENGINE AND BOILER TRIMMINGS.

EDSON'S PRESSURE-RECORDING AND ALARM GAUGE.
FOR RECORDING STEAM, WATER, GAS, NATURAL GAS, AIR, AMMONIA, OIL, BLAST-FURNACE,
AND PIPE-LINE PRESSURE.



E-35. EDSON'S RECORDING AND ALARM GAUGE. STYLE No. 2.

STYLE NO.						1	2
EACH	 _					85.00	80.00



FUSIBLE PLUGS.-E-41.

SIZE	ŀ	3*.	1	1}	Ιį	2
EACH	60	.75	1.00	1.25	1.75	2.50



BOILER

E-44. CONNECTION TO BOILER

# E+38. CLOW FUSIBLE PLUG.

#### CLOW SECURITY FUSIBLE PLUG AND LOW-WATER ALARM.

Our Alarm is a positive indicator of low water. When the metal fuses, it is forced by the pressure of escaping steam into the upper part of the offset, and the steam free of the metal operates the whistle, thus securing an absolutely sure and safe Low-Water Alarm. Directions for attaching and operating, accompany each Alarm.

# ENGINE AND BOILER TRIMMINGS.







E-54. ALTITUDE GAUGE.

# STEAM PRESSURE OR VACUUM GAUGES. - E-50.

IZE DIAL	INCHES	12	10	81	63	Å	54	5	4 ½	3 ‡	3
RASS CASE, SINGLE SPRING		\$5.00 50,00									
RASS CASE, DOUBLE SPRING		$80.00 \\ 55.00$									

#### ALTITUDE GAUGE.-E-54.

This Gange will indicate accurately, at the boiler, the amount of water in the system, and will be found a useful

EXPLANATION.—When the water is at its proper level in expansion tank, remove the ring and glass, and set the tionary hand at the pressure indicated by the working hand. Whenever the pressure falls below this point, water mild be added.



E-58, HYDRAULIC GAUGE.



E-60. WATER WORKS GAUGE.

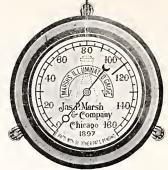
#### HYDRAULIC OR HYDROSTATIC GAUGES.

Size Dud, Inches	Pounds per Sq Inch.	Brass Case	Iron Case, Brass Ring	Bruss Case, Nickel Plated.	From Case, N. P. Ring
12	20,000	125.00	110.00	129.00	111.50
10	20,000	100,00	90.00	103 00	91.00
84	20,000	80.00	70.00	82.50	70.75
63	10,000	60,00	50.00	62 00	50.60
6	6,000	40.00	35.00	41.50	35.50
Maximum Hand, extra			5.00		

#### COMBINATION WATER WORKS GAUGES.

Size Dial, Inches	Bruss Case.	fron Case, Bruss Ring.	Brass Case, Nickel Plated.	Fron Case, N.P. Ring.
12	80 00	60.00	84.00	61.50
10	50,00	40.00	53.00	41.00
81	40.00	30.00	42.50	30.75
fi ĝ	25.00	20.00	27.00	20.60
6	20,00	16.00	21.50	16.50
54	16 00	14.00	17.25	14.25







E-63. SIDE VIE

E-62. ILLUMINATED TRIPOD GAUGE.

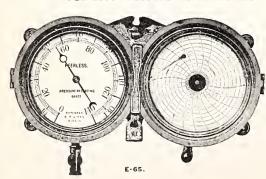
#### ILLUMINATED TRIPOD STEAM GAUGES.-E-62 and E-63.

SIZE DIAL INCHES	12	10	8 ½	64	6	51
BRASS CASE EACH IRON CASE EACH	75.00	40.00	30.00	20.00	16.00	12.00
	50.00	32.00	22.00	16.00	13.00	10.00

A gauge with an illuminated dial will be appreciated, especially in dark engine and boiler rooms. The Marsh Illum nated Gauge is constructed so that an electric, gas or oil lamp can be used, according to conditious or circumstances in engin or boiler room. We make illuminated gauges for all purposes. In most engine and boiler rooms artificial light is used i front of gauges to enable the cugiucer to see the pressure indicated on gauge, which is unsatisfactory. This can be avoid. by using the Marsh Illuminated Gauge, which reflects the light through the dial from back of gauge and throws a stead soft and satisfactory light. It also helps to light the engine or boiler room. Where electric lights are not available, til Welsbach gas light is superior to the ordinary gas burner or oil lamp. (We recommend this style of burner.)

The sectional view cuts show how the light should be arranged in connection with the gauge. The light is diffuse over the dial by passing through a prismatic lens. The dial of this gauge is superior to all other dials commonly used whe illumination is unnecessary. It is not injured by excessive heat, owing to its perfect insulation.

#### PEERLESS PRESSURE-INDICATING AND RECORDING GAUGES. E-65.



THE STANDARD RECORDING GAUGES O THE WORLD. FOR ACCURACY, DURABILITY AND ELE-

GANCE, UNRIVALED. EVERY GAUGE GUARANTEED TO BE SATIS

It makes a perfect chart, showing the extent duration, and time of every variation of pressure of steam, water, air or gas.

Each instrument is mounted ou an ornamenta board. Locks with Yale lock, runs eight days, has union cock, one year's supply of recording dials, filler and ink.

The tracing is done by stylographic pen, requiring filling with ink but once a month.

Everything complete with this Gange ready fort the piping.

PRICE, INCLUDING ONE YEAR'S SUPPLY OF DIALS 100.00

# ENGINE AND BOILER TRIMMINGS.







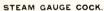


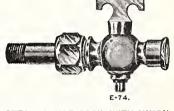


STEAM GAUGE SIPHONS.

FIGURE						
EACH 1.00 1.25 1.50 1.50 .50	FIGURE	E-68	E-69	E-70	E-71	E-72
	EACH	1.00	1.25	1.50	1.50	.50







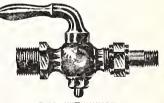
STEAM GAUGE COCK, WITH UNION.

SIZE, N-INCH EACH	.75	SIZE, 14-INCH EACH 1.75	-
			_









E-82. WITH UNION.

# CYLINDER COCKS.

SIZE.				-	-								-					IN	CHES	1	8 8	1/2	2
E-80 .																				1.15	1.30	1.85	2.60
E-81 . E-82																				1.25	1.50	2.00	2.70 3.75
- 0-	•	-	•	 _							÷		_				_			 			

# ENGINE AND BOILER TRIMMINGS







AIR COCKS.

SIZE		-												-				-	IN	CHES	lg B	4	3	1/2
E-86 E-88 E-90	-		-	-	-		-	-				-			 	 	-		 . 1	EACH	.40 .55 .55	.40 .55 .55	.50 .65 .65	.60 .75 .90







SIZE	-				-						-			-	-	-		INCHES	ig .	1	38	±
E-92			 				 			 								EACH	.60	.70	.85	1.00
																		EACH	.70	.70	.90	
E-96									-		-	-	-		-		 -	EACH	.80	.80	.95	







E-102.

SIZE									_	-					 NCHES	18	1	3	1/2	
E-96																.70	.70	.80 .90	.90 1.00	-
E-100 E-102																.95	1.15	1.25	1.50	-

# ENGINE AND BOILER TRIMMINGS.



IIO. WITH ADJUSTABLE LEVER.



F. 110



E-114. PLAIN

#### WHISTLES.-E-110 and E-114.

DIAMETER OF BELL INCHES	1	1 ‡	1 ½	2	24	3	31	4	5	- 6	8	10
SIZE PIPE INCHES	1	- ÷	1/2	3	1	1	1	11	1 ½	2	$2\frac{1}{2}$	2 ½
WITH VALVE EACH	3.10	3.75	4.00	5.50	6.50	8.50	11.50	15.00	22.50	33.00	95.00	210.00
PLAIN EACH	2.20	2.75	3.00	4.35	5.25	7.25	9.50	12.00	19.00	24.00	70.00	150.00





E-118. WHISTLE VALVE.



E-120. WITH REVERSIBLE LEVER.

# SINGLE BELL CHIME STEAM WHISTLES.

DIAMETER OF BELL INCHES	5	3	4	5	6	8	10	12
SIZE PIPE INCHES PLAIN EACH WITH VALVE EACH	$\frac{\frac{1}{2}}{5.00}$ $\frac{5.00}{1.00}$	\$.00 11.00	1 14.00 18.00	$ \begin{array}{c} 1\frac{1}{4} \\ 22.00 \\ 28.00 \end{array} $	$\begin{array}{c} 1\frac{1}{2} \\ 38.00 \\ 42.00 \end{array}$	$\begin{array}{c} 2 \\ 85.00 \\ 100.00 \end{array}$	$\substack{\frac{2\frac{1}{2}}{150.00}\\180.00}$	3 260.00 300.00

#### WHISTLE VALVES .- E-118.

SIZE INCHES	1/2	2	1	1‡	11	2	21/2	3
EACH	2.50	3.00	3.50	5.00	6.00	9.00	18.00	27.00

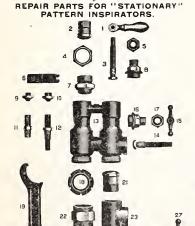


THE HANCOCK INSPIRATOR, "STATIONARY" PATTERN,-E-124.

		Capacities pe	в Посв.	F	TPE CON	NECTION	s.
SIZES.	PRICES.	With 60 lbs. Steam Pressure and 4 ft. Lift.	Maximum Horse Power.	Steam.	Suction.	Delivery.	Overflow
No.							
7 1	16.00	60 gallons	8	3.	2	ě	1
83	18.00	90 gallons	12	3	j.	į	ě
10	20.00	120 gallons	16	8	1	1	8
124	25.00	220 gallons	30	1	4	3	, į
15	30.00	300 gallons	1 40	į	3	4	1
174	40.00	420 gallons	56	3	1	1	1 1
20	45.00	540 gallons	72	3	1	1	4
224	55.00	720 gallons		i	11	11	1
25	60,00	900 gallons		1	11	11	1
30 .	75.00	1,260 gallons	168	11	11	11/2	11
35	90.00	1,740 gallons	230	11	11	14	11
40	110.00	2,230 gallons		1 1	2	2	1 1
45	125.00	2,820 gallons		1 1	2	1 ½ 2 2	11
50	150,00	3,480 gallons	464	2	21	21/2	2
55	175.00	3,650 gallons	600	2	21	27	2

Note.—Capacities guaranteed to be actual as listed.

E-124, HANCOCK INSPIRATOR.



E-125.



E-126, HANCOCK EJECTOR OR JET PUMP.

# HANCOCK EJECTORS OR JET PUMPS .- E-126.

NUMBER	1	5	3	4	5	в
CAPACITY PER HOUR . GALLONS	244	550	977	1525	2200	390
SIZE STEAM CONNECTION IN.	2	8	1 1	1/2	3	1
SIZE SUCTION AND DELIVERY . IN.	+	. 3	1	11	$1\frac{1}{2}$	2
EACH	8.00	10.00	15.00	20.00	25.00	35.0
NUMBER	7	8	9	10	11	
CAPACITY PER HOUR GALLONS	6000	8800	15600	24300	35000	
SIZE STEAM CONNECTION IN.	11	14	2	5 4	21	
SIZE SUCTION AND DELIVERY . IN.	24	3	4	5	6	
EACH	37.50	40.00	65.00	30.00	125.00	

Sizes 1, 2, 3 and 4 are made entirely of brass. Sizes 5, 6 and 7 have iron bodies and brass unions for steam and suction. Sizes 8, 9, 10 and 11 have iron bodies with brass unions for steam only.







E-129. AUTOMATIC INJECTOR.

E-131. AUTO-POSITIVE INJECTOR.

#### PENBERTHY AUTOMATIC INJECTOR.-E-129.

SIZE	00	A	AA	В	BB	С	cc	D	DD	E
PRICE EACH HORSE-POWER PIPE CONNECTIONS INCHES GALLONS PER HOUR, 1 TO 3 FT. 3 MAX. LIFT, 50 TO 75 LBS. PRESSURE 1 MIN.	4 to 8			25.00 15 to 25 250 135						75.00 120 to 165 1½ 1300 700

Working Range: Start low, 18 to 22 pounds steam on 4 foot lift. Work high, 150 to 160 pounds steam on 4 foot lift. Lift water 20 to 21 feet on 60 to 80 pounds steam. Handle hot water 120° to 125° at 60 to 80 pounds steam. 112° to 115° at 100 pounds steam. 95° to 100° at 125 pounds steam.

#### PENBERTHY AUTO-POSITIVE INJECTOR.-E-131.

SIZE	112	113	115	117	119	121	123
PRICE EACH PIPE CONSTEAM, SUCTION, DELIVERY	18.00	20.00	30.00	45.00 1	60.00 1‡	90.00 1½	125.00 2
CAPACITY, GAL. PER HOUR, 60 TO ( MAX. 80 LBS. STEAM, 3 FT. LIFT MIN	120 40	200 60	400 130	675 225	1125 375	2000 700	3000 1000
HORSE-POWER, ALLOWING 8 GALLONS PER HORSE-POWER PER HOUR	5 to 15	7 to 23	16 to 50	28 to 84	47 to 140	87 to 250	125 to 375

Working Range: Start low, 15 to 18 pounds steam on 3 foot lift. Work high, 225 to 235 pounds steam on 3 foot lift. Wark water 20 to 22 feet on 60 to 100 pounds steam. Handle hot water when flowing to Injector as follows: 143° to 145° and under, with 75 to 100 pounds steam: 133° to 135° and under, with 50 to 120 pounds steam: 118° to 120° and under, with 25 to 150 pounds steam. 98° to 100° and under, with 18 to 175 pounds steam.



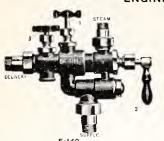
E-133. XL-96 EJECTOR OR JET PUMP.

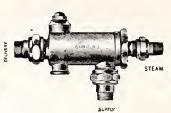
#### LIFTS 20 FEET ON 25 POUNDS STEAM, ELEVATES 50 TO 75 FEET.

NUMBER	1	2	3	4	.5	c	7	8	9	10
PIPE CONNECTION STEAM	3-	1 3	3 1	1 11	1 1 ½	1‡ 2	1½ 2½	2 3	2 34	2 <u>1</u>
CAPACITY 20 TO 40 LBS. STEAM, 3 FT. LIFT 20 TO 40 LBS. AND 65 TO 100 LBS.  PER HOUR 50 FT. ELEVATION, 40 TO 65 LBS., 1 FT. LIFT 25 FT. ELEVATION, 40 TO 65 LBS., 1 FT. LIFT	240 235 120 180	500 450 250 375	840 700 420 625	1350 1300 650 950	1950 1850 975 1450	3500 3000 1750 2600	5700 4350 2500 3750	9500 8160 4750 7200	13600 12400 6800 10200	18400 17100 9200 13800
VERTICAL LIFT   25 TO 40 LBS., AND 75 TO 100 LBS., FEET   40 TD 75 LBS FEET   PRICE	20 23 8.00	22 25 10.00	22 25 15.00	21 <del>}</del> 24	21½ 26 25.00	21½ 26 35_00	22 26 40.00	20 25 50.00	21 25 70.00	21 25 95.00

Nos. 7, 8, 9 and 10 are all iron except Jets. These sizes made in all brass to order. Prices on application.

### ENGINE AND BOILER TRIMMINGS.







E-140.

GARFIELD DOUBLE JET INJECTOR.

E-141.
GARFIELD AUTOMATIC INJECTOR.

OHIO AUTOMATIC INJECTOL

# GARFIELD DOUBLE JET AND AUTOMATIC INJECTORS.-E-140 and E-141.

NUMBER	00	0	1	- 2	3	4	5	6
EACH	16.00	18.00	20 00	25 00	30 00	40.00	45 00	,55 00
SIZE OF   STEAM	2	3	- 1		1/2	ì	1	1
CONNECTIONS   SUPPLY AND DELIVERY	2	1	1 1	7	1 1	1	1	1 1
GAL. PER HOUR, 80 LBS. STEAM PRESS.	60	90	120	220	300	420	540	720
HORSE-POWER, BO LBS. STEAM PRESSURE	2 to 5	5 to 10	10 to 15	15 to 24	24 to 35	35 to 50	50 to 65	65 to 5
NUMBER	î	8	9	10	11	12	13	14
ACH	60.00	75.00	90 00	110 00	125 00	150.00	180 00	200 (
SIZE OF STEAM	1	11	11	1 ½	1 1	2	2	2
ONNECTIONS   SUPPLY AND DELIVERY	11	1 1	14	2	2	2 +	21	2
AL. PER HOUR, BO LBS. STEAM PRESS.	900	1200	1700	2200	2800	3400	4000	4500
HORSE-POWER, BO LBS. STEAM PRESSURE	90 to 115	115 40 150	150 to 900	200 to 225	975 to 350	350 to 425	195 to 500	5000 to

#### THE OHIO AUTOMATIC INJECTOR.-E-142.

SIZE	0	1	2	3
EACH CAPACITY PER HOUR, GALLONS HORSE-POWER PIPE CONNECTIONS	18.00	20 00	25 00	30 00
	120	165	250	340
	8 to 10	10 to 15	15 to 25	25 to 35

The capacities given above for Garfield and Ohio Automatic Injectors are obtained by actual measurements, on the following basis:

Steam 80 lbs.; lift 4 feet and feed water at 76 degrees Fahr. The actual capacities are in excess of the list and fully equal to any make of same size, connections and price

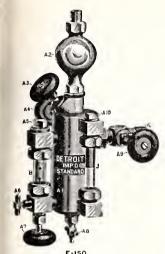
#### THE GARFIELD EJECTOR.-E-144.

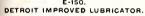
NUMBER	1	2	3	4	5	6	7
EACH STEAM CONNECTION SUCTION CONNECTION DELIVERY CONNECTION CAPACITY GALLONS PER HOUR	8.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	10.00 \$ 1 \$ 500	15.00 12 14 1 800	20.00 11/2 11/2 11/4 1300	25.00 1 2 1½ 2000	35.00 11 21 2 2 3000	50.00 1½ 3 2½ 5000

The above capacities are secured from actual tests made on 6 foot lift and 20 foot elevation with 60 pounds of steam. For a greater lift or elevation the capacity is decreased in same proportiou as with other Ejectors.



E-144 GARFIELD EJECTOR.







E-154. PLAIN LUBRICATOR.



E-158. JET PUMP.

### DETROIT IMPROVED SIGHT-FEED LUBRICATORS.-E-150.

CAPACITY	} Pint.	½ Pint.	1 Pint.	1 Quart.	½ Gallon.	1 Gallon.
SIZE FOR CYLINDER POLISHED BRASS _ EACH NICKEL PLATED EACH	Under 10-inch 17:00 20:00	10 to 12-inch 22 00 25.00	12 to 18-inch 30.00 35.00	18 to 30-inch 45.00 50.00	30-inch and over 60.00 65.00	75.00 80.00

# WOOD WHEEL LUBRICATORS.-E-154.

DIAMETER OF BODY INCHES	1	11	1 ½	13	2	21/4	21/2	3
PIPE THREAD	2.00 3.00	$\frac{8}{2.20}$ $3.20$	$\begin{array}{c} \frac{1}{2} \\ 2.40 \\ 3.40 \end{array}$	$\frac{\frac{1}{2}}{2.60}$ $\frac{3.60}{3.60}$	$2.90 \\ 3.90$	$\frac{3}{4}$ 3.25 4.25	$\frac{3}{3.75}$ $4.75$	4.75 5.75

#### JET PUMPS.-E-158.

SIZE INCHES	3	1	11	11	2
BRASS JETS . EACH IRON BRASS MOUNTED JETS . EACH	4.00	5.00	6.00	7.50	9.00
SUCTION PIPE INCHES DISCHARGE PIPE INCHES STEAM PIPE INCHES	34 3	1 1,	14 14	$\frac{1\frac{1}{2}}{1\frac{1}{2}}$	2 2 3
CAPACITY GALLONS PER MINUTE	8 to 10	12 to 15	15 to 20	25 to 30	30 to 40



SINGLE CONNECTION.

# ZERO (COLD WEATHER) LUBRICATORS.

SINGLE AND DOUBLE CONNECTION.

FOR TRACTION, STATIONARY, HOISTING, PORTABLE ENGINES AND STEAM PUMPS.

We make two styles of Double Connection Zero Lubricators-Style "A" and Style "C."

The Style "A" Double Connection Zero should be attached with both connections on same side of throttle, either above or below, as circumstances will permit.

The Style "C" Double Connection Zero has spray feed feature, and should take steam above the throttle and deliver the oil below the throttle, either into steam pipe or top of steam chest.

In ordering Double Connection Zero Lubricators, please say

whether Style "A" or Style "C" is wanted.

The Single Connection Zero Lubricator may be attached to the steam pipe on either side of the throttle or to the steam chest direct. DETROIT ZERO LURRICATORS -F-162 and F-164

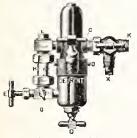


DOUBLE CONNECT

32.00

47.00

DETITION EURINO	A10110. L	-102 2110 1	10		
CAPACITY	⅓ Pint	3 Pint	½ Pint	1 Pint	1 Quart
BRONZE BODY, FINISHED TRIMMINGS EACH	15.00	17.00	20.00	28.00	42.00



NICKEL PLATED ALL OVER . . . . . . . . . EACH

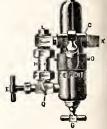
-PINT SINGLE CONNECTION LUBRICATORS.

18.00

20.00

23.00

FOR SMALL ENGINES AND STEAM PUMPS.



E-168. STYLE E. WITHOUT REVERSIBLE VALVE

E-166. STYLE D. WITH REVERSIBLE VALVE.

#### DETROIT %-PINT SINGLE CONNECTION LUBRICATORS.-E-166 and E-168.



. . . . . . EACH 12.00NICKEL PLATED . . . . . . EACH BRASS . 14.00

#### DETROIT LUBRICATORS .- E-170.

# FOR GAS AND GASOLINE ENGINES, AIR COMPRESSORS AND AMMONIA CYLINDERS.

CAPACITY	4 Pint	1 Pint	½ Pint	1 Pint	1 Quart
BRONZE BODY, FINISHED TRIMMINGS EACH NICKEL PLATED ALL OVER					

In ordering, state if wanted for gas, air, or ammonia.



# MICHIGAN "IMPROVED CYCLONE" LUBRICATORS.

CAPACITY .	ł Pint.	₹°Pint.	1 Pint.	1 Quart.	Gallon.
POLISHED BRASS EACH	13.30	15.00	20 00	26.75	38.35
NICKEL PLATED EACH	14.30	16.00	21 35	28.35	40.35

E-175.



E-178. SLIDE TOP GLASS OIL CUP.



E-179. QUICK STOP FLUSHING OIL CUP.



E-180. AUTOMATIC CRANK PIN OIL CUP.

#### MICHIGAN GLASS OIL CUPS.-E-178 and E-179.

CAPACITY	1	3	1	1 ½	21	33	5	6	10	Pint.
DIAMETER OF GLASS SHELL INCHES E-178. SIZE OF SHANK, PIPE THREAD INCHES E-179. SIZE OF SHANK, PIPE THREAD INCHES E-179. FINISHED BRASS EACH E-179. FINISHED BRASS EACH	1 t t t t t t t t t t t t t t t t t t t	14 4 1 1.35 2.00		4110		28 8 8 3.30 4.00	2½ \$ 4.50	23 1 1 2 4.00 5.00	3½ ½ 5.35 6.00	3± 3 4 6.65 7.65

#### AUTOMATIC NEEDLE VALVE CRANK PIN OIL CUPS.-E-180.

CAPACITY	3-4	1	1 ½	2‡	33	6	10
DIAMETER OF GLASS SHELL . INCHES SIZE OF SHANK, PIPE THREAD . INCHES	1 1	18	13	2 3	23	23	3 1/3
FINISHED BRASS	1.50	2.00	2.70	3.35	4.00	6.35	10 00

# ENGINE AND BOILER TRIMMINGS.



E-190. SLIDE TOP AND LOCKNUT.



E-192. SLIDE TOP, SIGHT



E-194. SLIDE TOP, SIGHT FEED AND LOCKNUT. AND STOP FEED AND LOCKNUT.



E-196. SKELETON OIL CUP FOR JOURNALS.

# GLASS BODY OIL CUPS.

DIAMETER INCHES HEIGHT INCHES CAPACITY OUNCES PIPE THREAD INCHES	1 ½ 1 3 ½	1‡ 1‡ ½ ½ *‡	1½ 1½ 1 ½×3	13 18 11 11	2 11 2 8	21 21 3	2½ 28 4 8	8 3 3	3½ 4 1 Pint ½
E-190. BRASS EACH E-192. BRASS EACH E-194. BRASS EACH E-196. BRASS EACH EXTRA GLASSES, INCLUDING CORK WASHERS, EACH	1.50	1.50 1.65 .10	1.70 2.80 3.50 2.00 .12	1.90 3.00 3.75	2.10 3.25 4.00	2.45 3.70 4.45	3.25 4.50 5.25	4.80 6.55 7.30	7.00 8.75 9.50

Nickel Plated, add 50 cents each to above list.

\*Size pipe thread, E-196.

E-196 Skeleton Oiler can be furnished with locknut for Crank Pins.



E-200. PLAIN.



E-202. HINGED LID.



E-204. ELBOW SHANK.



E-206, LEVER HANDLE.

#### BRASS OIL CUPS.

DIAMETER OF BODY, INCHES PIPE THREAD INCHES		24-46	142 41	1 1	1 #	11	1 4	13	13	1 %	2 8	2 1	2 <del>1</del> 1 2	2 ½ ½	24	3
E-200 EACH	. 25	.30				.60								2.75	2.75	4.50
E-202 EACH						1.40										
E-206 EACH				1.35		1.60	2.20					3.25	4.00			









"PIONEER" AND "ROYAL" GLASS OIL CUPS.-E-216 and E-218.

NUMBER	000	00	0	1	$1\frac{1}{2}$	2	3	4	5	6
DUTSIDE DIAMETER OF GLASS INCHES CAPACITY OUNCES SHANK PIPE THREAD INCH "PIONEER." FINISHED BRASS EACH "ROYAL." FINISHED BRASS EACH	1 \$ .70 .95	$\frac{1\frac{1}{8}}{\frac{1}{2}}$ .75	$1\frac{1}{4}$ $\frac{5}{8}$ $\frac{1}{8}$ $.80$ $1.25$	11 1 1 1.00 1.50	$ \begin{array}{c c} 1\frac{3}{4} \\ 1\frac{1}{2} \\ 1.25 \\ 1.75 \end{array} $	2 2½ 8 1.50 2.10	$2\frac{1}{4}$ $\frac{3}{8}$ $1.90$ $2.55$	2½ 5 2.40 3.15	$ \begin{array}{c} 3 \\ 10 \\ \hline 3.10 \\ 3.90 \end{array} $	$ \begin{array}{c} 3\frac{1}{2} \\ 18 \\ 4.00 \\ 4.80 \end{array} $

# "SENTINEL" SNAP LEVER SIGHT-FEED GLASS OIL CUPS.-E-220.

NUMBER	0	1	11/2	2	3	4	5	6
OUTSIDE DIAMETER OF GLASS         INCHES           CAPACITY         OUNCES           SHANK PIPE THREAD         INCH           FINISHED BRASS         EACH	11 11 18 3.00	$1\frac{1}{2}$ $1$ $3.25$	$1\frac{3}{4}$ $1\frac{1}{2}$ $\frac{1}{4}$ $3.50$	2 2 1 8 3,75	2† 4 4 4.25	2½ 5 3 5.25	3 10 1.25	$\frac{3\frac{1}{2}}{18}$ $\frac{1}{9.25}$

To avoid mistakes when ordering Glasses and Cork Washers, specify name and number of cup, as stamped on same.













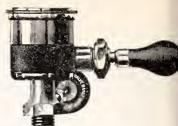
"IDEAL" GREASE CUPS .- E-222.

NUMBER	00	0	1	5	3	4
OUTSIDE DIAMETER . INCHES SHANK PIPE THREAD . INCH CAPACITY (GREASE) . OUNCES	11/2	133	2	276	3 3 6	3\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
FINISHED BRASS EACH	1.50	2.00	2.50	3.20	1: 30	6,00

"TIGER" GREASE CUPS.-E-224.

NUMBER	00	0	1	2	3	4
SHANK PIPE THREAD . INCH CAPACITY (GREASE) DUNCES FINISHED BRASS . EACH ROUGH BRASS . EACH	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 3 .90 .74		1.50 1.28		5 2,90 2,30





E-234. HAND CYLINDER OIL PUMP.

E-235. HAND CYLINDER OIL PUMP, WITH VALVE.

#### HAND CYLINDER OIL PUMPS .- E-234 and E-235.

CAPACITY	1	1	1
SIZE OF BOWL	2\frac{1}{3} \times 2\frac{1}{4} 3.50 3.65	23 x 23 5.00 5.25	$\begin{array}{c} 3\frac{1}{2} \times 3\frac{1}{2} \\ 7.50 \\ 7.80 \end{array}$



E-237. COMMON SENSE CUP.



E-239. RELIABLE CUP.



E-241. SPRING COMPRESSION CUP.

#### GREASE CUP.-E-237.

OUTSIDE DIAMETER INCHES	11	1 ġ	2	2 8	23	3 4
CAPACITY OUNCES	3	1 ½	3	4 ½	7	10
SIZE OF SHANK INCHES	1	82	8	8	1	1/2
BRASS FINISH EACH	1.25	1.50	2,50	3.50	5.00	8.75
NICKEL PLATED	1.50	1.70	3.00	4.00	5.90	10.00

# GREASE CUP.- E-239.

DIAMETER INCHES	1	11	1 }	2	2}	3
PIPE THREAD	. <del>1</del> . 70	.90	1.15	1.40	2.15	2.90

#### SPRING COMPRESSION GREASE CUP.- E-241.

CAPACITY	OUNCES	1 }	3	4½	7	10
FINISHED BRASS NICKEL PLATED OUTSIDE DIAMETER SIZE OF SHANK	EACH EACH INCHES . INCHES	1.50 1.75 1§	2.50 2.75 2 8	3.25 3.55 2g	4.75 5.15 23 1	8.50 9.00 3\frac{1}{8}



# PENBERTHY "SAFETY" AUTOMATIC DOUBLE-FEED CRANK-PIN OILERS.

CAPACITY	OUNCES	1	ž	1‡	24	3 ½	43
	INCHES INCHES INCH EACH NET, EACH NET, EACH	1 ± 1 ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ±	1½ 18 1.75 .10 .03	13 1½ 8 2.00 .11 .03	2 1 <sup>3</sup> / <sub>4</sub> 8 2.50 .12 .04	2 t 2 t 2 t 3 . 00 . 15 . 04	$2\frac{1}{2}$ $2\frac{1}{8}$ $\frac{1}{2}$ 4.00 .25 .05



All sizes made in both Regular and Locomotive style.

E-250. REGULAR STYLE.









'PARAGON" INDEX LEVER

"STANDARD" BOILER OIL INJECTOR.

GLASS BODY OIL PUMP.

#### "PARAGON" INDEX LEVER SIGHT FEED LUBRICATOR.-E-255.

NUMBER	2	. 4	5	6	8
OUTSIDE DIAMETER OF GLASS INCHES CAPACITY OUNCES SHANK PIPE THREAD INCH FINISHED BRASS EACH	2 2½ 8 8 2.80	2½ 5 \$ 4.00	$\frac{3}{10}$ $\frac{1}{2}$ $5.40$	3½ 18 18 7.00	32 32 14.00

When ordering extra glasses and oork washers, give number of cup as stamped on same.

## "STANDARD" BOILER OIL INJECTOR, FOR STEAM BOILERS .- E-257.

CAPACITY	½ Pint	1 Pint	1 Quart	½ Gallon	1 Gallon	1월 Gallons	2 Gallons
IRON, BRASS TRIMMINGS         EACH           BRASS, PART FINISHED         EACH           BRASS, ALL FINISHED         EACH           SUITABLE FOR BOILERS         HP.	7.50 8.00 10	10.00 10.60 25	13.50 14.25 75	16.50	19.50	22.50	30.00

## LUNKENHEIMER GLASS BODY OIL PUMPS .- E-259.

NUMBER	3	5	6	8
OUTSIDE DIAMETER OF GLASS INCHES CAPACITY SHANK PIPE THREAD INCH FINISHED BRASS EACH	2\frac{1}{2} Pint 7.50	3 ½ Pint 8.50	$ \begin{array}{c} 3\frac{1}{2} \\ 1 \text{ Pint} \\ \frac{1}{2} \\ 10.00 \end{array} $	1 Quart 1 Quart 15.00



E-270. SIGNAL OILER. LEVER UP.



E-270. SIGNAL OILER. LEVER DOWN.



E-274. CROSS-BAR OILER. STOP FEED.

POWELL'S GLASS ENGINE OILERS.-E-270 and E-274.

NUMBER	00	0	1	1 ½	2	3	4	5	6
CAPACITY OUNCES DIAMETER OF GLASS INCHES	14	1 ±	11	1 13	2	1 Pt.	1 Pt.	½ Pt.	1 Pt
SIZE IRON PIPE CONNECTION INCH	1 1 1	3 00	3.25	3.50	3.75	4.25	5.25	$\frac{1}{2}$	1 2
SIGNAL OILER, FINISHED EACH CROSS-BAR OILER, FINISHED EACH	1.30	1:40	1.50	1.75	2.00	2.25	2.65	3.35	4.50
EXTRA GLASSES WITH WASHERS NET, EACH	. 15	. 20	. 25	.30	.35	.40	.60	.80	1.5



E-276. CLASS A.



E-278. CLASS C.



E-280. ALL IRON.

#### POWELL'S IMPROVED GREASE CUPS.

NUMBER	00	0	1	2	3	4
CAPACITY         OUNCES           DIAMETER OF BODY         INCHES           SIZE IRON PIPE CONNECTION         INCH           E-276-CLASS A, FINISHED         EACH           E-278 CLASS C, FINISHED         EACH           E-280-ALL IRON PAINTED         EACH	$ \begin{array}{c} 1 \\ 1 \\ 2.00 \\ 1.75 \\ .85 \end{array} $	$ \begin{array}{c c} 1 \\ 1\frac{1}{4} \\ 2.50 \\ 2.10 \\ .95 \end{array} $	1½ 1½ 8 3.00 2.50 1.00	3 2 4.00 2.85 1.05	$ \begin{array}{c} 4\frac{1}{2} \\ 2\frac{1}{2} \\ \frac{1}{2} \\ 5.00 \\ 4.25 \\ 2.25 \end{array} $	9 3 1 6.00



E-282. CLASS E.

# POWELL'S SHORT PATTERN GREASE CUPS-E-282.

NUMBER	00	0	1	2	3	4
CAPACITY OUNCES ROUGH BRASS EACH FINISHED BRASS EACH	.56 .07	.74 .90	.96 1.15	11 1.28 1.50	$3\frac{1}{4}$ 1.76 2.15	5 2.30 2.90

# ENGINE AND BOILER TRIMMINGS.









E-290. STATIONARY.

E-291. BRASS PORTABLE

"STANDARD" WATER E-293. "UNDERWRITER" RELIEF VALVE.

## \*CROSBY POP SAFETY AND WATER RELIEF VALVES.

SIZE INCHES	3	1	14	1 ½	5	$2\frac{1}{2}$	3	31/2	4	4.1	5	6
HORSE-POWER OF BOILER .	5	10	20	30		75		125			200	200
E-290, WITHOUT LOCKUP					30.00	50.00	65.00	80.00	100.00	125.00	160.00	250.00
E-290, WITH LOCKUP					35.00	55.00	75.00	90.00	110.00	135.00	170:00	270.00
E-291	10.00	12.00	15.00	20.00	30.00							
E-292, IRON					30.00	50.00	65.00	80.00	100.00	125.00	160.00	250.00
E-292, BRASS	10.00	12.00	15.00	20.00	30.00							
E-293, IRON					30.00	50.00	65.00	80.00	100.00	125.00	160.00	250.00



E-295. STATIONARY



E+296. BRASS PORTABLE.



E-298. WATER RELIEF VALVE

### \*ASHTON POP SAFETY AND RELIEF VALVES.

SIZE INCHES	3	1	14	1 <u>†</u>	2	2 ₺	3	3‡	4	4 ½	5	6
DIAMETER OF INLET FLANGE . HORSE-POWER OF BOILER			15	25	î 35	8 50	9	10 100	10 120	12 140	12 170	14
E-295, IRON	0.00	2 00	10.00	10.00							85.00	125.00
E-296, BRASS				30.00	40.00	60.00	75 00	80 00	85.00	105.00	125.00	150.00
E-298, BRASS	7.00	9 00	12 50	16.50	23.00	40.00	65.00					

<sup>. \*</sup>In ordering Safety Valves, state pressure to blow off, and whether screwed or flanged ends.

# ENGINE AND BOILER TRIMMINGS.



E-300. STATIONARY.



E-302. BRASS, PORTABLE.



E-304. BRASS ATER RELIEF VALVE



E-306, IRON WATER RELIEF VALVE

## AMERICAN POP SAFETY AND RELIEF VALVES.

SIZE INCHES	3	1	11	1 1	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	4 ½	5	6
OIAMETER BASE FLANGE . INCHES			20	30		8	10	10	11	175	11 200	12 225
HORSE-POWER OF BOILER EACH		10					100 65.00	125 80.00	150 100.00	175 115.00		180.00
E-302 EACH			$15.00 \\ 15.00$				65.00	80.00	100.00	150.00		
E-306 EACH					30.00	50.00	65.00	80.00	100.00	150.00		



E-308. GONG.



E-310. OIL WASTE CAN.



E-312. CONE TOP OIL CAN.

# GONG BELLS, POLISHED BELL METAL.-E-308.

OIAMETER INCHES	4	5	6	7	8	· 10	12	14	16	18 35.00
EACH	2.75	3.25	3.90	5.00	6.00	8.00	14.00	25.00	30.00	35.00

## WASTE AND OIL CANS .- E-310 and E-312.

	E-310. OIL WASTE CAN, OIAMETER 11% INCHES, HEIGHT 15 INCHES EACH E-312. WITH TWO PUMPS, MEASURING AND LIFT, CAPACITY 60 GALLONS EACH	2.50
1	E-312. WITH TWO PUMPS, MEASURING AND LIFT, CAPACITY 60 GALLONS	20.00



RAILROAD OILER. For lists, see next page.

E-327. ENGINEERS' SET.

E-326.

## ENGINE AND BOILER TRIMMINGS.

#### BRASS AND STEEL OILERS,- E-320 and E-321.

NUMBER	12	13	14	14a	14h	15	16
DIAMETER	23 24 4.50 6.50	38 3 5.50 8.00	38 9 6.50 9.20	31 3 7.50	34 9 8.50	41 3 9.25 12.00	11 9 10.50 14.00

## MALLEABLE OILERS AND HAND LAMPS .- E-322.

NUMBER	1	2	3
MALLEABLE OILERS	3.60 5.00	4.00	4.40

#### ENGINEERS' FILLERS .- E-323.

NUMBER	19	<b>1</b> 9 <i>a</i>	210	211	190	200	201
CAPACITY PER OOZEN BRASS PER OOZEN	1 Pint	1½ Pints	1 Quart	2 Quarts	1½ Pints	1 Quart	2 Quart
	14.00	17.00	20.00	24.00	22.00	30.00	34.00

Add to above lists for Patent Attachment, \$1.00 per dozen.

#### STEEL TALLOW POTS,-E-324.

5 INCHES DIAMETER, 5 INCHES HIGH, CAPACITY 1 QUART PER DOZEN	21.00
6 INCHES DIAMETER, 6 INCHES HIGH, CAPACITY 2 QUARTS.	25.00

#### STEEL JACKET LAMPS .- E-325.

1	DIAMETER INCHES	38	34	41
	PER DOZEN	6.00	9.00	12.00

#### RAILROAD OILERS,-E-326.

NUMBER	10	11	· 11a	17	18	18a
DIAMETER BICHES HEIGHT MCHES LENGTH OF SPOUT INCHES CAPACITY STEEL. PER DOZEN BRASS PER DOZEN	3 \$ 5 12 1 Pint 14.00	18 1 Quart 18.00	5 8 18 2 Quarts 20.00	3 g 5 12 1 Pint	44 6 18 1 Quart	5 8 18 2 Quarts

#### OILER SETS .- E-327.

NUMBER OF	PIECES			-	-						-	-	 	2	-	-		÷	-	-	5	6
ENGINEERS' ENGINEERS' STEAMBOAT STEAMBOAT	NICKEL-PLA BRASS SET	TED S	SETS.	-	-	 -	-	 	-	-	-	-	 	-	-	-	-	:	EAC EAC	H	7.00 8.00 7.00 9.00	10.00 11.00 10.00 12.00

Steamboat sets are so made as to prevent the motion of the vessel displacing the oilers.







F-2. FAVORITE



F-3. PERFECTION.

# STEAM AND WATER, DIRECT RADIATION.

								•••					
HEIGHT INCHES	45	44	38	32	31	26	25	23	20	18	16	14	13
PRICE PER SQUARE FOOT CENTS	41	41	42	46	46	49	49	53	57	58	60	64	66
VERONA, STEAM AND WATER			4	31		23			2				
PERFECTION STEAM	5		4	31		23		2 1/3	2				
DETROIT ORNA., STEAM AND WATER	5 <del>1</del>		41	31/3	31	23	23		2 2 1				
( PLAIN, STEAM AND WATER	51		413		$3\frac{1}{2}$		23		21				
NATIONAL, STEAM AND WATER	5 5		4	3 <del>1</del> 3 <del>1</del>		23 23		21	2 2				
NATIONAL SINGLE COL, STEAM AND WATER			3	21		23		2± 13	11				
ROCOCO, STEAM AND WATER		6	5	41		33				21			
NATIONAL FOUR COL., STEAM OR WATER _ ITALIAN FLUE, STEAM AND WATER			8 7	6 <sup>2</sup> / <sub>3</sub>		5± 4±		43	4 3‡			4,- 4	
MONARCH FLUE, STEAM			91	8		6		5			31/3	31	
DETROIT FLUE, STEAM OR WATER FAVORITE, STEAM AND WATER	5		4						6	5 1/3	4 2	4	33
KALAMAZOO, STEAM AND WATER	5		4	31		22			2 2				201

Figures in above columns opposite names of patterns of radiators indicate the heights in which the various patterns are nade, and amount of heating surface contained in each height section.



F-4. DETROIT ORNAMENTAL.

# INDIRECT RADIATION. PRICES QUOTED ARE PER SECTION.

		_
PRIMUS, WATER, 8 SQ. FT. PER SEC.	2.16	
EXCELSIOR, STEAM AND WATER, 12 SQ. FT. PER SEC.	3.24	
PERFECTION PIN, STEAM OR WATER, STANDARD SIZE, 10 SQ FT. PER SEC.	2.70	
PERFECTION PIN, STEAM OR WATER, EXTRA LARGE, 15 SQ. FT. PER SEC	4.05	
CARDINAL, STEAM OR WATER, 15 SQ. FT. PER SEC.	4,05	i
STERLING, STEAM OR WATER, 20 SO, FT, PER SEC.	5 40	ı



F-6. ITALIAN FLUE, WITH BOX BASE.

# IRON PIPE RETURN BEND RADIATORS.



F-2S. RECTANGULAR RADIATOR.



F-26. CIRCULAR RADIATOR.

## RECTANGULAR, ONE ROW.-F-25.

WHOLE NUMBER OF TUBES AND SQUARE FEET OF SURFACE .  LENGTH . INCHES  VIDTH	6 15½ 6	8 10 19½ 24 6 6	12 281 3	16 20 36% 45% 6 6	24 533 6	28 621 6	32 70‡ 6
----------------------------------------------------------------------------	---------------	-----------------------	-------------	-------------------------	----------------	----------------	----------------

## TWO ROWS.

NUMBER TUBES IN EACH ROW	4	6	8	10	12	16	20	24	28	32
WHOLE NUMBER OF TUBES AND SQUARE FEET OF SURFACE .  LENGTH INCHES  WIDTH INCHES	8	12	16	20	24	32	40	48	56	64
	111	15½	19‡	24	28‡	36‡	451	53‡	621	70 <del>1</del>
	63	6¾	6³	61	6‡	6‡	63	6‡	62	61

## THREE ROWS.

NUMBER TUBES IN EACH ROW	4	6	8	10	12	14	16	18	20	24	28	32
WHOLE NUMBER OF TUBES AND SQUARE FEET OF SURFACE LENGTH	12 11}	18 15} 84	24 19 <del>3</del> 84	30 24 84	36 28}	42 32½ 81	48 363 81	54 39 81	60 45‡ 81	72 53 <del>1</del> 84	84 621 81	96 70‡

#### FOUR ROWS.

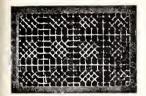
NUMBER TUBES IN EACH ROW	10	12	14	16	18	20	22	24	26	28	30
WHOLE NUMBER OF TUBES AND SQUARE FEET OF SURFACE	40	48 281	56 321	64 367	72 39	80 451	88 491	96 534	104	112	120 664
WIDTH INCHES	11	11	11	11	11	11	11	11	11	11	11

## CIRCULAR.-F-26.

į	WHOLE NUMBER OF TUBES AND SQUARE FEET OF SURFACE	18	36	54	84	120	
	OUTSIDE DIAMETER	13	17	21	251	29	

Radiators are tapped as follows:

Size of Inlet for Single Pipe—36 tubes or less, 1 inch; 40 to 70 tubes, 1½ inches; 72 to 120 tubes, 1½ inches. Size of Inlet and Outlet for Double Pipe—36 tubes and less, ½x¾; 40 to 78 tubes, 1x¾; 80 to 120 tubes, 1¼x¾.







F-31. CIRCULAR.

#### REGISTERS.-Japanned Black or White.-F-30.

Size of Opening.	Register.	Register Face.	Floor Border.	Ventilator for Cords.	Size of Opening.	Register.	Register Face.	Floor Border.	Ventilator for Cords
6 x 8	. 90	. 35	.60	1.15	12 x 20	4.00	1.85	1.75	4.25
6 x 10	1.00	. 45	. 65	1.25	12 x 24	5.25	2.50	2.35	5.50
6 x 12	1.15	. 50	.70	1.40	12 x 30	7.50	3.25	2.90	7.75
8 x 8	1.00	. 50	. 65	1.25	12 x 36	10.00	4.50	3.50	10.25
8 x 10	1.10	. 55	.70	1.35	14 x 14	3.60	1.65	1.50	4.10
8 x 12	1.25	.60	.75	1.50	14 x 16	3.95	1.75	1.60	4.45
8 x 14	1.60	.70	. 90	1.85	14 x 18	4.30	1.95	1.80	4.80
8 x 15	1.80	.80	1.05	2.05	14 x 20	4.65	2.15	2.00	5.15
9 x 9	1.25	. 60	.75	1.50	14 x 22	5.00	2.40	2.25	5.50
9 x 12	1.40	.70	.85	1.65	16 x 16	4.60	2.10	1.85	5.10
9 x 13	1.60	.75	.90	1.85	16 x 20	5.70	2.75	2.40	6.20
9 x 14	1.70	.80	.95	1.95	16 x 24	7.00	3.25	2.75	7.50
9 x 15	2.00	.90	1.10	2.25	18 x 18	7.10	3.10	2.55	7.60
10 x'10	1.50	.65	. 80	1.75	18 x 24	8.50	3.90	3.10	9.00
10 x 12	1.60	.80	. 90	1.85	18 x 30	11.75	5.60	3.75	12.25
10 x 14	1.90	.90	1.00	2.15	20 x 20	7.50	3.25	2.75	8.00
10 x 16	2.30	1.10	1.30	2.55	20 x 24	9.00	4.25	3.25	9.50
10 x 18	3.10	1.40	1.45	3.35	20 x 26	9.75	4.65	3.50	10.25
10 x 20	3.85	1.60	1.65	4.10	20 x 30	12.50	5.75	4.30	13.00
12 x 12	2.25	1.10	1.25	2.50	20 x 36	16.00	8.00	5.25	16.50
12 x 14	2.50	1.20	1.35	2.75	21 x 29	11.50	5.10	3.90	12.00
12 x 15	2.65	1.30	1.40	2.90	24 x 30	14.15	6.90	4.25	14.65
12 x 16	2.85	1.40	1.45	3.10	24 x 36	18.75	9.00	5.60	19.25
12 x 17	2.95	1.50	1.50	3.20	27 x 27	14.25	7.15	4.50	14.75
12 x 18	3.20	1.60	1.55	3.45	30 x 30	18.25	8.50	5.50	18.75
12 x 19	3.50	1.70	1.60	3.75	30 x 36	25.25	13.00	6.50	25.75

#### CIRCULAR REGISTERS,-Japanned Black or White.-F-31.

SIZE OF OPENING INCHES	6	7	8	9	10	12	14	16	18	20	24	30
REGISTER EACH	.70	.80	. 90	1.15							10.35	17.00
REGISTER FACE EACH	.30	. 35	.45	. 55	. 65	1.00	1.50	2.00	2.75	3.25	5.00	8.25
VENTILATOR FOR CORDS EACH	. 95	1.05	1.15	1.40	1.65	2.05	3.45	4.00	5.85	6.75	10.85	17.50



F-35. OPEN.

#### PERFECTION SASH VENTILATOR.

F-35. CLOSED.

SIZE INCHES	1½ x 9	1½ x 12	2 x 9	2 x 12
BRONZED         EACH           PLATED         EACH           BRONZED METAL         EACH	.75	1.00	1.00	1.15
	2.20	2.70	2.70	3.35
	2.35	2.85	2.85	3.50

Price includes Plate for finish on outside of Sash.



# "THE TRIUMPH" WATER HEATERS.

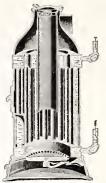
(TRADE MARK)

FOR HEATING RESIDENCES, OFFICES, STORES, GREENHOUSES, CONSERVATORIES POULTRY HOUSES, AND TANKS OF WATER FOR BATHS, BARBER SHOPS, AND FOR GENERAL PURPOSES.





F-50. WITH PLAIN HOOD



F-51. SECTIONAL.



F-51, WITH MAGAZINE HOOD.

# "THE TRIUMPH" WATER HEATERS. (PATENTED.)

NUMBER	0	0 }	I	2	3	-4	5	6
F-50. PLAIN HOOD EACH	25.00	30.00	40.00	50.00	75.00	100.00	145.00	175.00
F-51. MAGAZINE HOOD EACH	28.00	33.00	45.00	55.00	85.00	110.00	155.00	185.00
DIAMETER INCHES	12	12	14	16	21	21	30	30
F-51. HEIGHT OVER ALL INCHES	31	35	48	48	55	68	70	70
HEATING CAPACITY FOR TANKS GALLONS	90	120	150	180	350	500	750	950
HEATING CAPACITY FOR RADIATORS SQ. FT.	75	100	120	150	300	425	600	750
NUMBER OF OUTLETS AND SIZE INCHES	2-1	2-1	2-11	2-11	3-15	3-2	2-3	2-3
NUMBER OF INLETS AND SIZE INCHES	2-1	2-1	2-11	2~11	3-1	3-2	2-3	2-3
APPROXIMATE WEIGHT POUNDS	150	- 165	275	350	795	895	1425	1550

#### WHEREIN THEY EXCEL.

ECONOMY IN THE USE OF FUEL.—Every square juch of heating surface is so placed with respect to the fire as to be effective, and the products of combustion are retained long enough, before exit through the stack, to derive good result from the fuel.

THEIR ABSOLUTE SAFETY.—We have never known of anyone's being harmed through using a Triumph Boiler, even wher.

the user was grossly careless. The scientific arrangement of the water spaces into tubes and compartments on the same general plan as larger boilers in steam power plants and war vessels explains the reason why.

QUICK CIRCLASTION.—Within a few minutes after a fire is started, our water heaters begin to circulate hot water, and

QUICK CIRCULATION.—Within a few initutes after a fire is started, our water heaters begin to circulate hot water, and our steam boilers raise steam with remarkable rapidity. This is possible only because the water ways contain a small volum of water and are arranged to avoid friction.

EXTREME DURABILITY.—The life of these boilers is practically unlimited, as every part is built in exact duplicate, so i any piece should give out through eareless usage or neglect it can be replaced.

FREEDOM FROM LEAKAGE.—The compartments and tubes which form the boilers are of such thickness and shape as to give great strength, while all joints are serewed or made with lockuuts and packed, and every boiler is thoroughly tested for the duty it is to perform. As a result, they remain tight under trying conditions.

ALL KINDS OF FUEL ARE SUITABLE.—Every size of every style of Triumph Boiler has a fuel door centrally placed in the

ALL KINDS OF FUEL ARE SUITABLE.—Every size of every style of Triumph Boiler bas a fuel door centrally placed in the side. This allows a fire box deep enough to carry a good body of fuel, a combustion chamber of proper size, and also ready access to the fire. They are, therefor, good soft coal as well as hard coal burners and are suitable for other grades of finel as well.

#### THE AWARDS THEY HAVE RECEIVED.

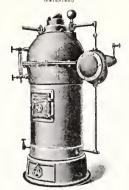
In appreciation of their high merit, numerous awards have been given the Triumph Boilers in the United States, and they have not been without recognition abroad. Among others granted were a medal and diploma at the World's Columbiar Exposition for excellence of construction and adaptability for general use. (Send for "Triumph" Heater catalogue.)

# "THE TRIUMPH" BOILERS.

(names and )



F-60. STEAM HEATER.



F-62. STEAM GENERATOR.



F-64. SAFETY BOILER



"THE TRIUMPH" STEAM HEATERS.-F-60.
FOR HEATING STORES, OFFICES AND RESIDENCES.

NUMBER	1	2	3	4	5	6
PRICE	70.00 14 48 10 75 1—1 1—1 400	80.00 16 50 12 90 1—1 1—1 500	$\begin{array}{c c} 100.00\\ 21\\ 60\\ 25\\ 185\\ 2-1\frac{1}{4}\\ 900\\ \end{array}$	$\begin{array}{c} 125.00 \\ 21 \\ 69 \\ 38 \\ 285 \\ 2-1\frac{1}{2} \\ 2-1\frac{1}{4} \\ 1000 \end{array}$	205.00 30 72 50 375 2—2½ 2—2 1975	235.00 30 72 60 450 2—2½ 2—2 2100

"THE TRIUMPH" STEAM GENERATORS. F-62.

OR LAUNDRIES, RESTAURANTS, BOTTLERS, DYERS, MILK DEPOTS, DAIRY USE, ORDERING TOBACCO, ETC.

NUMBER	1	2	3	4
PRICE         INCHES           DIAMETER         INCHES           HEIGHT OVER ALL         INCHES           APPROXIMATE WEIGHT         POUNDS	50.00	60.00	90.00	100.00
	14	16	21	21
	48	50	60	69
	350	450	850	950

"THE TRIUMPH" SAFETY BOILERS.-F-64.
FOR PUMPS, SMALL ENGINES, JACKET KETTLES, ET C.

NUMBER	1	2	3	4
PRICE DIAMETER INCHES HEIGHT OVER ALL INCHES HORSE POWER APPROXIMATE WEIGHT POUNDS	14 48	70.00 16 50 1 475	95.00 21 60 2 890	105.00 21 69 21 990

Special Catalogue of "The Triumph" Boilers sent upon application.



F-80. WITH PLAIN HOOD.



F-B1. SECTIONAL, WITH MAGAZINE



F-90. TOBASCO HEATER

## WILKS WATER HEATERS.-F-80.

SIZE OF HEATER INCHES	10 x 15	10 x 18	12 x 24	12 x 30	14 x 30	14 x 3
HEATING CAPACITY PER HOUR GALLONS SIZE OF OPENING INCHES APPROXIMATE HEATING POWER, 2-INCH PIPE FEET HEIGHT FROM FLOOR TO TOP INCHES PRICE EACH	30	40	65	75	100	125
	\$\frac{3}{4}	<del>3</del>	1	1	1¼	14
	50	60	100	125	150	175
	22\frac{1}{4}	25 <del>1</del>	32 <sup>1</sup> / <sub>4</sub>	38‡	40½	464
	20, 00	21.00	25.00	26,50	30.00	32.06

#### WILKS WATER HEATERS.-F-81.

SIZE OF HEATER INCHES	16 x 30	16 x 36	<b>20 x</b> 30	20 x 36	20 x 42	24 x 36	24 x 42	30 x 42	30 x 48	36 x 42	36 x 48	42 x 42	42 x
HEATING CAPACITY PER HOUR, GALLONS	140	150	200	250	275	325	350	600	700	900	1000	1200	130
SIZE OF OPENING INCHES	11/2	1 - )	2	2	2	2	2	3	3	3	3	3	3
APPROX. HEATING POWER, 4-IN. PIPE FT.	250	300	425	450	500	700	900	1200	1250	1450	1550	2000	24
HEIGHT FROM FLOOR TO TOP . INCHES	57	62	66	72	78	76	82	84	90	87	93	90	9(
PRICE EACH	57.50	60.00	72.00	75.00	80.00	105.00	110.00	130.00	135.00	185.00	195.00	215.00	225

#### TOBASCO WATER HEATERS (MAGAZINE FEED) .- F-90.

NUMBER	17	18	21	22	23	24	25	26	27	30	31	32
HEATING CAPACITY PER HOUR GALLONS	130	150	200	250	300	350	300	350	400	500	600	700
	71.00											
GALVANIZEO EACH	79.00	84.00	94.00	101.00	108.00	115.00	142.00	150.00	159.00	174.00	189.00	198.0
DIAMETER	17	17	21	21	21	21	25	25	25	30	30	30
HEIGHT OVER ALL INCHES	48	54	57	57	63	69	_ 57	63	69	67	73	79
SIZE FLOWS AND RETURNS INCHES	2-11	2-13	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-3	2-3	2-3



F-100. IDEAL JUNIOR.

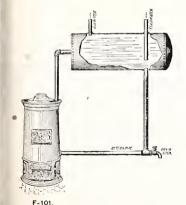


F-100. SECTIONAL.

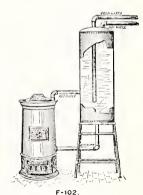
#### IDEAL JUNIOR WATER BOILERS.-F-100.

IUMBER	0	10	*11	+12	20	*21	+22	30	*31	+35	‡33
HEIGHT FLOOR TO TOP OUTLETS INCHES	31	35	35	40	43	43	47	43	43	47	51
HAMETER OF HEATER INCHES	18	21	21	21	23	23	23	27	27	27	27
NAMETER OF GRATE	10	12	12	3 11	15	15	15	3 9	18	18	18 3, 2
NRECT RADIATION	60	80	120	160	175	225	275	325	375	425	475
APACITY, GALLONS PER HOUR, FROM 40° TO 212°	80	120	160	200	250	300	350	400	450	500	550
ACH	30.00	45.00	47.50	50.00	62.50	65.00	75.00	80.00	87.50	105.00	117.50

\*This Boiler has drop tube. †This Boiler has drop tube and extra section. ‡This Boiler has drop tube and two ra sections.



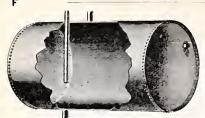
ATER CONNECTED TO HORIZONTAL TANK.



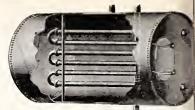
HEATER CONNECTED TO VERTICAL TANK.

NOTE.—Ratings provide that all mains or risers shall be covered or counted as radiating surface, and an allowance ivalent to this surface should be made accordingly, in estimating size of Boiler to be used.

When soft coal is used for fuel, a size larger Boiler should be figured than when hard coal is to be used.







F-115. TANK WITH STEAM COIL.

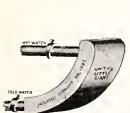
STEEL TANKS-Tested to 100 Pounds Pressure. F-110,

CAPACITY GALLONS	66	\$5	100	120	145	170	180	215	250	290	315	365	420	430	5
										76.00 101.00		98.00	108.00	110.00	12.
LENGTH FEET	5	5	5	5	6	7 24	5	6	7 30	8 30	6 36	7 36	8 36	6	• •
DIAMETER INCHES WEIGHT POUNDS	18 220	20 250	22 280	320	24 360	400	480	540	590	640	780	810	880	1150	1

## COILS BUILT IN TANKS .- Extra .- F-115.

CAPACITY GALLONS	66	85	100	120	145	170	180	215	250	290	315	365	420	430	575
GALVANIZED COILS . EACH	9.00	9.00	9.00	13.00	13.00	13.00	13.00	13.00	14.00	14.00	17.00	19.00	16.00 20.00	18.00	21.0
BRASS COILS EACH SIZE, 4-PIPE COIL INCHES		20.00 1	20.00	29.00	31 00 11	$35.00$ $1\frac{1}{4}$	29,00 1}	31.00 1}	35 00 1}	$\frac{40.00}{1\frac{1}{4}}$	40.00 1½	45,00 1½	51.00 1½	111	51.0 1½

Manholes, \$10.00 extra, net. Vertical tanks furnished at same price.



F-120. LITTLE GIANT.



F-122. FOR STEEL DOME FURNACES.



F-124. FOR STOVES.

LITTLE GIANT WATER HEATERS, FOR FURNACES.-F-120.

NUMBER	U	1	2	3
NUMBER FEET OF RADIATION WILL HEAT	30	50	100	150
EACH	6.00	7.50	9.00	12.00

#### F-122.

DIAMETER INCHES	12	14	16	18	20	22	24
NUMBER FEET OF RADIATION WILL HEAT	50 6.00	75 7.50	100 9,00	150 12,00	200 15.00	250 18.00	300

F-124. MALTESE HEATERS.—10 inches diameter each, \$3.00. 12 inches diameter each, \$3.5. Two or more Maltese Heaters can be coupled together. Write for Descriptive Circular of these Heaters.

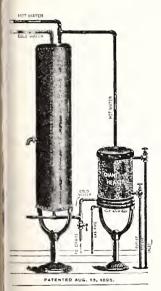


#### CHAMPION WATER HEATER.

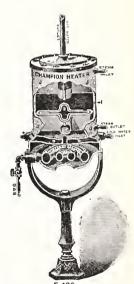
OPERATED IN WINTER BY STEAM OR HOT WATER FROM THE HEATING
SYSTEM, AND IN SUMMER BY GAS OR GASOLINE.

		_	_	_		_	=		_	 =		-	-	_	_	=	_	_	 _		 
WATER HEATER.	WITI	н :	ЭΤΑ	NI	)															_	30.00
GAS BURNER								i	i		i										4.00
GASOLINE BURNE	R .																				8.00
HOOD																					5.00

Descriptive Catalogue sent upon application.



F-135, CONNECTED.



SECTIONAL OPERATED BY GAS.

The Champion Water Heater is the best, most reliable, economical and safe device for heating water ever invented. It so snimple any person can use it. Figure F-135 shows Heater connected to kitchen tank. By attaching hot water delivery to post fank, as shown in cut, hot water can be drawn from Heater without heating contents of tank. When water ceases to be drawn, circulation through tank commences, and the tank then acts as a receiver for the water, which can be brought to my temperature required. It is desirable to have a tank or reservoir to receive the hot water. An ordinary kitchen tank, no matter how small, will answer the purpose. When Heater is connected, as shown in Figure F-135, with steam or hot sater heating system, it requires no attention and furnishes an abundant supply of hot water at a cost so slight that it can carcely be estimated.

For detailed directions for setting Heater, write for illustrated circular.



F-150. MANVILLE'S MAGNESIA-ASBESTOS, WITH CANVAS JACKET AND METAL BANDS.



F-155. MANVILLE'S PERFECTION, WITH CANVAS JACKET AND METAL BANDS



F-160. STANDARD ASBESTOS LINED WOOL FELT, WITH SHEETING JACKET AND METAL BANDS.



F-165. ECLIPSE MINERAL WOOL.

## SECTIONAL COVERINGS FOR STEAM AND WATER PIPES.

MADE IN THREE-FOOT LENGTHS TO FIT ALL SIZES OF PIPE.

INSIDE DIAM. OF PIPE, INCHES	1/2	3	1	1‡	1 ½	2	2 <del>ļ</del>	3	3 }	4	4 1/2	5	6	7	8	9	10	12
PER LINEAL FOOT	. 20	. 22	.23	. 24	.25	.27	. 31	.36	.40	.44	.47	. 50	.58	. 66	.73	.80	.90	1.10
ELBOW COVERS EACH	. 25	. 25	. 25	. 25	. 25	.27	.31	. 36	.40	.44	.47	.50	.58	. 66	.73	. 80	. 90	
TEE COVERS EACH	.33	.33	.33	. 33	. 33-	. 36	. 41	.48	. 53	. 59	. 63	.67	.77	.88	.97	1.07	1.20	
VALVE COVERS EACH	. 25	. 25	.25	. 25	. 25	.27	. 41	.48	. 53	.59	.63	.67	.77	.88	.97	1.07	1.20	
CROSS COVERS EACH	. 35	. 43	. 43	. 43	. 43	.48	.53	. 60	.68	.75	.80	.90	1.00	1.10	1.20	1.35	1.50	

Elbows, Tees and Valves can be covered at comparatively little cost by using Asbestos Cement, applied even with the pipe covering and finished with a trowel. Muslim or canvas jacket may be pasted over, when a uniform and durable finish is desired. One bag of Asbestos Cement will cover about 60 fittings, sizes up to 2-inch; larger sizes in proportion.

SECTIONAL COVERS FOR ELBOWS, TEES AND VALVES are made only of the Magnesia-Asbestos and the Standard Covering, either of which may be used with the Perfection or Eclipse Mineral Wool Covering.

## BLOCK COVERING FOR BOILERS, BREECHING, HEATERS, TANKS, DRUMS, ETC.

MAGNESIA-ASBESTOS BLOCKS—Sizes, 4x18 inches or 6x36 inches:
- 11 inches thick, 45 cents per square foot.
2 inches thick, 50 cents per square foot.

ECLIPSE MINERAL WOOL BLOCKS—Size, 8x18 inches: - - - - - 11 inches thick, 45 cents per square foot.

### ASBESTOS CEMENT FELTING.

Put up in bags of about 125 lbs. each, - - - - - - - - - Price, per bag, No. 1 Grade, \$4.00.

F-150.—Magnesia-Asbestos Covering is composed of magnesia, asbestos, and other non-conducting fire-proof materials. It is absolutely fire-proof and useful on any pressure of steam.

F-155.—Perfection is a combination covering; one-half moulded core of magnesia and asbestos, other half of corrugated wool felt, making an efficient and very durable covering of the highest grade and useful on all pressures of steam.

F-160.—Standard Covering is made of the best quality wool felt and asbestos lining. It is a first class non-conductor, and useful on low pressure steam and hot and cold water pipes.

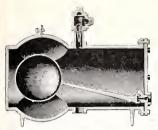
F-165-ECLIPSE MINERAL WOOL COVERING is absolutely fire-proof and useful on any pipes.

#### HAIR FELT.-F-168.

IN ROLLS CONTAINING 300 SQUARE FEET.



	PER SQUARE FOOT .08	
	PER SQUARE FOOT . 15	2







F-190. STANDARD STEAM TRAP.

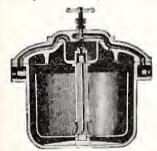
## PATENT IMPROVED STEAM TRAPS.-F-185.

NUMBER	 1	2	3
DRAINAGE CAPACITY, FEET OF 1-INCH PIPE	1500 25.00	4000 35.00	10000 65.00

## STANDARD STEAM TRAPS,-F-190.

DIAMETER INCHES	12	15	18
DRAINAGE CAPACITY, FEET OF 1-INCH PIPE	1500	3500	5000
	23.00	36.00	54.00

Patent Improved Steam Traps will work satisfactorily under a pressure as high as 150 pounds.



IN ORDERING STEAM TRAPS, STATE AT WHAT PRESSURE TRAP IS TO WORK.

INLIT CONTRACTOR OF THE PARTY O

F-200. DAVIS STEAM TRAP.

F-195. NASON IMPROVED STEAM TRAP.

#### NASON IMPROVED STEAM TRAPS. F-195.

NUMBER	1	2	3	4	5
DRAINAGE CAPACITY, FEET OF 1-INCH PIPE GREATEST NUMBER OF SQUARE FEET TO WHICH IT SHOULD BE APPLIED . EACH	1050	2700	4200	6000	10500
	350	900	1400	2000	3500
	16.00	20.00	27.50	42.50	70.00

#### DAVIS STEAM TRAPS.-F-200.

NUMBER	00	0	1	2	3
DRAINAGE CAPACITY, FEET OF 1-INCH PIPE INCHES EACH	1500	3000	6500	15000	20000
	12	15	17	21	25
	15.00	20.00	30.00	45.00	60.00



F-230. WITH TRAP.

## CURTIS PATENT STEAM AND GREASE SEPARATORS.

FOR EXTRACTING GREASE AND IMPURITIES FROM STEAM.



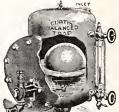
F-231. WITHOUT TRAP.

SIZE PIPE	INCHES	1	11	1 1	2	2 }	3	3 ½	4	5	6	7	Ж	10	12
F-230. WITH TRAP														270.00	
F-231. WITHOUT TRAP		15.00	18.00	25.00	34.00	37.00	40.00	45.00	52.00	64.00	80.00	101.00	128.00	200.00	300.



## THE CURTIS PATENT RETURN STEAM TRAP.-F-235.

FOR RETURNING ALL CONDENSATIONS DIRECTLY BACK INTO THE BOILER WITHOUT THE AID OF TANKS, PUMPS OR INJECTORS.



F-238. CURTIS STEAM TRAP.

#### F-235. CURTIS RETURN TRAP.

## CURTIS PATENT RETURN STEAM TRAPS.-F-235.

NUMBER	1	2	3	4
DRAINAGE CAPACITY IN FEET OF 1-INCH PIPE	4000 to 5000	8000 to 10000	15000 to 20000 11	30000 to 40000
TRAPS	100.00 12.00	150.00 15.00	200.00 20.00	300.00 35.00

#### CURTIS BALANCED STEAM TRAPS.~F-238.

NUMBER	000	00	0	1	2	23	3	4	5
CONDENSING CAPACITY IN FEET OF 1-IN. PIPE SIZE OF INLET AND OUTLET INCHES EACH	$\frac{1000}{\frac{1}{2}}$ 15.00	1500	2500 1/2	4000	7000	10000	15000 1½	26000 2 100.00	45000



#### LAWLER AUTOMATIC EXPANSION TANK .- F-240.

NUMBER	0	1	2	3	4	5	6	?	8
SIZE	10x20	12x20	12x24	12x30	12x36	14x30	14x36	16x30	16x30
CAPACITY IN GALLONS	8	10	12	15	18	20	24	26	32
SQUARE FT. OF RADIATING ! SURFACE, TANK WILL CARRY!	260	350	450	525	650	750	850	900.	1100
COMPLETE WITH FEEDER!	18.50	19.50	20.25	20.75	21.50	24.25	25.00	26.00	27.0

With this arrangement of Automatic Expansion tank there is absolutely no danger from burning the boiler, which is often the result of neglecting to keep the system filled. Further, there is no escape of steam or evaporation from the hot water escaping through the house.

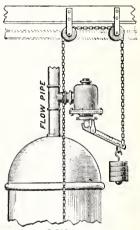
F-240

#### LAWLER AUTOMATIC WATER FEEDER.

# FOR LOW-PRESSURE STEAM BOILERS

When used on Low-Pressure Steam Boilers, the ordinary water columns may be dispensed with, as this is not only an Automatic Feeder, but a water column with water gauge. It is also largely used on hot water heating plants, placed above the highest radiator, having an overflow pipe extending from the top connection to any closet tank or open plumbing fixture, and entirely dispensing with the use of expansion tank.

	-	_	_	 -	=	=	_	-	
PRICE									12.50
					_				



F-25D. HOT WATER REGULATOR.

# NO. 6 WATER FEEDER.

#### LAWLER HOT WATER REGULATOR.-F-250.

#### FOR AUTOMATICALLY CONTROLLING THE DRAFT DOORS OF HOT WATER BOILERS.

This Hot Water Damper Regulator will operate the draft doors of a hot water heater at any temperature of the water om about 120 degrees up, by changing the position of the weights on lever. Special points about this Regulator which rould command the attention of the practical Hot Water fitter, is that the device has but one connection to be connected to the heating apparatus, which is a 2-inch close nipple connected to a tee on the flow pipe, thus doing away with a sturn connection, besides in no way interfering with the flow of water through the main flow pipe of heater. There is othing delicate about it, so that it is not liable to get out of order, and the next special point is that its price is low. The process of the market for several years and has proved to be a success and is highly appreciated by those the baye used them.

l	PRICE										,,,		-					2	5.0	0	
п		_				-			 _								-				_



F-255.

## AUTOMATIC WATER FEEDERS, FOR HIGH OR LOW PRESSURE .- F-255.

20.00



F-260. LOW PRESSURE REGULATOR.

CLARKE REGULATOR.

LOW PRESSURE DAMPER REGULATORS.-F-260.

10.00

#### CLARKE DAMPER REGULATORS.-F-265,

-	NUMBER	. 1	2	3
	EACH	10.00 5	15.00 20	25.00 30 to 500



For Altitude Gauge see page 119.

F-270. EXPANSION TANK.

# EXPANSION TANKS, GALVANIZED.-F-270.

	T 1	_	_							_		
CAPACITY . GALLONS	10 19	15	18	20	24	26	32	42	66	82	100	120
DIAMETER INCHES						16	16	16		20	22	24
HEIGHT INCHES												
EACH	8.008.5	0 9.00	9.50	12.50	13.00	14.00	15.00	16.50	31.00	37.00	51.00	58.00

These prices are for Tank only. See F-1 for Gauge.

## THERMOMETERS.-F-275.

OTDAIGUT COM			
STRAIGHT EACH	4.00	ANGLE EACH	5.00



F-275, THERMOMETER FOR HOT WATER APPARATUS.



## THE O. S. DISTRIBUTING FITTINGS.

FOR CONNECTING RADIATORS, COILS, ETC.
INSURING POSITIVE CIRCULATION
AND PERFECT DISTRIBUTION
TO ALL PARTS OF THE
SYSTEM.



F-290. DISTRIBUTING FITTING.

# DISTRIBUTING FITTINGS.-F-290.

SIZES	1 x 3 x 3 1 x 3 x 1 1 x 1 x 1 1 x 1 x 1	1\frac{1}{4} \times 1 \times 1 1\frac{1}{4} \times 1 \times 1 1\frac{1}{4} \times 1 \frac{1}{4} \times 1 1\frac{1}{4} \times 1\frac{1}{4} \times 1 1\frac{1}{4} \times 1\frac{1}{4} \times 1 1\frac{1}{4} \times 1\frac{1}{4} \times 1 1	$\begin{array}{c} 1\frac{1}{2} \times 1\frac{1}{3} \times 1 \\ 1\frac{1}{2} \times 1 \times 1\frac{1}{4} \\ 1\frac{1}{2} \times 1 \times 1\frac{1}{4} \\ 1\frac{1}{2} \times 1\frac{1}{4} \times 1\frac{1}{2} \\ 1\frac{1}{2} \times 1\frac{1}{4} \times 1\frac{1}{4} \\ 1\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2} \end{array}$	$\begin{array}{c} 2 \ x \ 1^{\frac{1}{4}} \ x \ 1^{\frac{1}{2}} \\ 2 \ x \ 1^{\frac{1}{2}} \ x \ 1^{\frac{1}{4}} \\ 2 \ x \ 1^{\frac{1}{2}} \ x \ 1^{\frac{1}{4}} \\ 2 \ x \ 2 \ x \ 1^{\frac{1}{4}} \\ 2 \ x \ 2 \ x \ 1^{\frac{1}{4}} \\ 2 \ x \ 2 \ x \ 2 \end{array}$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
EACH	,60	. 80	.90	1.20	2.00

These Fittings are useful for other purposes and are not confined to hot water heating alone. Brass Fittings—rough, polished or nickel plated made to order.

#### CIRCUIT FITTINGS.-F-293.

SIZES	1½ x 1½ x 1¼ 1½ x 1½ x 1	2 x 2 x 1 ½ 2 x 2 x 1 ¼ 2 x 2 x 1 ¼	$\begin{array}{c} 2\frac{1}{2} \times 2\frac{1}{2} \times 2 \\ 2\frac{1}{2} \times 2\frac{1}{2} \times 1\frac{1}{2} \\ 2\frac{1}{2} \times 2\frac{1}{2} \times 1\frac{1}{4} \\ 2\frac{1}{2} \times 2\frac{1}{2} \times 1 \end{array}$	$\begin{array}{c} 3 \times 3 \times 2\frac{1}{2} \\ 3 \times 3 \times 2 \\ 3 \times 3 \times 1\frac{1}{2} \\ 3 \times 3 \times 1\frac{1}{4} \\ 3 \times 3 \times 1 \end{array}$	3½ x 3½ x 3 3½ x 3½ x 2½ 3½ x 3½ x 2 3½ x 3½ x 2	$\begin{array}{c} 4 \times 4 \times 3\frac{1}{2} \\ 4 \times 4 \times 3 \\ 4 \times 4 \times 2\frac{1}{2} \\ 4 \times 4 \times 2\frac{1}{2} \\ 4 \times 4 \times 1\frac{1}{2} \end{array}$
EACH	.90	1.20	2.00	3.00	4.00	4.75

Circuit Fittings are devised to distribute the flow equally to all risers. Use this fitting as a substitute for ordinary tees; they east but little more.

Successful heating with hot water is a matter of equal and positive distribution to the radiating surfaces. The natural course of the hottest water in a heating system is straight to the top. Though varied for different situations, the details of the pipe connection always carry into effect the "principle" of breaking the "rising current," and with ordinary fittings, a profusion of joints and possible leaks can in no way be avoided—miless O. S. Distributing Fittings are used as a substitute.

The difficulties attending the making of numerous joints, especially in close quarters or between joists, are well known to all having a practical knowledge of such matters. A more important consideration, however, is the obstruction to circulation caused by the abrupt passages in common fittings. Avoid these vexations and solve your problems in distribution by using fittings which are designed for the purpose.

Special Catalogue sent upon application—in it we illustrate the old and new methods of running pipes for water heating.



F-30D. STRAIGHT CONNECTION.



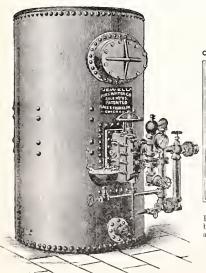
F-301. BELL CONNECTION.

# CAST-IRON BLOW-OFF AND CATCH-BASINS.-F-300 and F-301.

DIAMETER INCHES	24	30	36	42	48
36 INCHES DEEP         EACH           42 INCHES DEEP         EACH           48 INCHES DEEP         EACH           54 INCHES DEEP         EACH           60 INCHES DEEP         EACH	23,00	30.00	40.00	45.00	60,00
	30.00	35.00	45.00	50.00	65,00
	35.00	40.00	50.00	55.00	70,00
	40.00	45.00	55.00	60.00	77,50
	45.00	50.00	60.00	65.00	85,00

## JEWELL WATER FILTERS.

FOR CITIES, WATER WORKS, FACTORIES, PUBLIC BUILDINGS, ETC.



F-310.

# STANDARD SIZES OF PRESSURE FILTERS. CAPACITY BASED AT 40 POUNDS PRESSURE IN FILTER.

Diameter. Inches.	Pipe Connections,	Capacity in U. S. Standard Gallons per 24 Hours.	Price, with Chemical Tank, Complete, each.
12	3	3,000	100.00
16	3	8,000	225.00
24	1	20,000	425.00
30	11	30,000	600.00
36	11/2	45.000	725.00
42	2	60,000	840.00
48	2	75,000	1,000.00
54	24	100,000	1,200.00
60	21	125,000	1,500.00
72	2 <u>i</u> 3	170,000	1,900.00
84	4	235,000	2,350.00
96	4	310,000	2,900.00
120	6	500,000	4,200.00

Special High Pressure Filters for Water Works use, or Gravity Filters constructed to order of any capacity. Prices are free on board cars at Chicago. Special Catalogue of Filters sent on application.



## LYMAN EXHAUST HEAD, FOR END OF PIPE ABOVE ROOF.

PIPE SIZE	1	1 ½	2	2 }	3	3 <u>‡</u>	4	41	5
EACH	20.00	20.00	25.00	25.00	30.00	30.00	40 00	40.00	50.00
PIPE SIZE	6	7	8	9	10	12	14	16	18
EACH	60.00	75.00	90.00	105.00	125.00	150.00	200.00	250.00	300.0

#### LYMAN EXHAUST PIPES.

SIZE INCHES	3	4	5	6	î	8	9	10	12	14	16	18	20
PER FOOT EACH	.35 1.50	.50 2.00	.65 2.80	.80 4.00	.95 5.00		1.40 8.50					4.00 18.00	



F-330. LOCK SEAM PIPE.

## LOCK SEAM GALVANIZED PIPE AND FITTINGS, NOT FOR PRESSURE.-F-330.

SIZE INCHES	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4	5	6
PER FOOT	.12 .20 .18 .25 .18	.14 .20 .18 .30 .18	.17 .25 .22 .40 .22	.19 .30 .24 .45 .24	.25 .40 .36 .60	.30 .55 .50 .78 .50	.38 .70 .64 .96

For Spiral Riveted Pressure Pipe, see page 25.



F-335. GLOBE VENTILATOR.



F-336. STAR VENTILATOR.

## GLOBE AND STAR VENTILATORS.-F-335 and F-336.

SIZE INCHES	3	3	4	5	6	7	8	10	12	14	16	18	50	24
PRICE EACH	1.00	7 1.50	$\frac{12}{1.75}$	$^{19}_{2.50}$	27 3.40	37 4.00		75 5.75					300 33.00	432 40.00

By estimating the number of square inches in your Flue, you can decide what size Ventilator to order.







F-350. LARD TANK COCK.

F-355. BRINE COCK, IRON PIPE.

F-356. BRINE COCK, FOR HOSE.

## BRASS LARD TANK COCKS, IRON PIPE,- F-350.

SIZE	 	INCHES	1 ½	2
EACH	 		12.00	16.00

## BRASS BRINE COCKS. F-355 and F-356.

				-
SIZE	 INCHES	3	1	1.1
EACH	 	1.75	2.50	4,00



F-360. HOG WASH VALVE.

SIZE	 	INCHES	1	11
EACH	 		3.00	4.00



F-361. HOG WASH VALVE, WITH LEVER.

SIZ	É			 _		IN	СНІ	ES	1	11
EΑ	СН.	٠.				·.			4.00	5,00



F-365. PERFECTION GATE.



F-370. RENDERING TANK COCK.

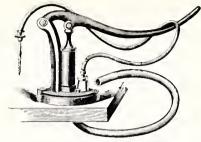
#### PERFECTION GATES.-F-365.

SIZE .								 	_	-	_	-		 	 -	IN	СН	ES	Ĺ	1	1 ½	2	3	3	
EACH	 	-	 _	_	-		_			-			_	 _	 	-	_	-0.		1.00	1.50	2.00	2.	75	_

## AIR COCKS, FOR RENDERING TANKS.-F-370.

ROUGH BRASS, SIZE 14-INCH	EACH	. 90

SED BY NEARLY ALL PACKERS.



FORCES PICKLE INTO EVERY PART OF THE HAM AT ONCE.

#### IMPROVED HAM CURING PUMP.-F-380.

PRICE EACH 10.00



F-385. CLOW CARBON STEEL PICKLING NEEDLE.

F-390. PICKLE COCK.

#### CLOW CARBON STEEL PICKLING NEEDLE.-F-385.

The Clow Pickling Needle is a very superior article, and guaranteed not to bend or break. The tube is of high-grade abon steel, in one piece, drawn to a taper head and perforated.

## PICKI.E COCKS.-F-390.



# GALVANIZED ASH CANS.-F-395.

NUMBER	· · · ·	8	9	10
SIZE INC	thes 15 x 26 5.25 ach .70	17 x 26	18 x 26	20 x 26
EACH		6.00	6.25	7.00
COVERS E		.80	.85	.90

#### GALVANIZED MILL PAILS.-F-400

		_	_		_	-	-	_								
ı	10-QUART			_		_								_	PER DOZEN	5.30
ı	12-QUART	_	_		_		-		-	-	-	-	-	-	PER DOZEN	6.00
Į	14-QUART		_												PER DOZEN	6.23



F-395. ASH CAN.

F-400. HEAVY MILL PAIL

# BRASS GAS FIXTURE FITTINGS.



G-1. TWO-LIGHT PENDANT



G-2. BRACKET COCK.

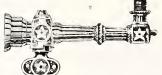


G-3. UNIVERSAL BRACKET

SIZE INCHES	ã x ₫	8 x ‡	§ x §	1 X 1
G-1         PER DOZEN           G-2         PER DOZEN           G-3         PER DOZEN	9.10 13.00	9.10 8.45 12.35	9.10 8.15 12.05	8.45 8.15 12.05



C.4 FLROW BURNES



G-5. ELBOW BURNER, 4 IN. LONG.



E ELBOW PENDANT

SIZE INCHES	1/2	3	14	ř	
G-4	6.20	5.25 8.45	4.55 8.45	4.25	
SIZE INCHES	3 x 3	8 x 1/4	3 X 18	† x }	1 X 1/3
G-6	5.85	5.20	5.20	5.20	4.90



G-7. MIDDLE SWING.



G-8. UNIVERSAL PENDANT,



G-9. UNIVERSAL SWING.

SIZE INCHES	g x g	8 x 4	§ X ⅓	4 x }	1 x 1	å x å
G-7 PER DOZEN G-8 PER DOZEN G-9 PER DOZEN	10.20 9.10	9.75 8.80	9.45 8.80	4.90 9.10 8.45	4,55 8,80 8,15	4.25 7.80

## BRASS GAS FIXTURE FITTINGS.



G-10.



G-11. STRAIGHT COCK.



G-12.



G-13.

SIZE INCHES	½ X ½	½ X 8	½ x ¾	3 x 8	8 X 1	8 X 1	1 x 1	1 x 1	1/8 X 1/8
G-10 PER DOZEN	6.20			5.85 4.90	5.20 4.55	5 20 4.55	5.20 4.55	4.90 4.25	4.90 3.90
G-12 PER DOZEN G-13 PER DOZEN	3.25	2.60	2.60	6.20 1.95	5.55 1.85	5.20 1.55			



G-14. PILLAR COCK.



G-15. HOSE COCK.



G-16. INDEPENDENT COCK.



G-17. GAS STOVE COCK.

SIZE INCHES	1	4	į	8	1	ř.
G-14		6.50	5.20	4.55	4.25 4.55	3 90 4.25
G-16 PER DDZEN G-17. FINISHED BRASS PER ODZEN				6.50	6.50 5.50	6.50 5.50



G-18. BRACKET BODY.



G-19.



G-20.



G-21.



G-22.

SIZE	-						-	-						-	-	-	 			-		-		INCHES	8	1	‡
																								00ZEN	3.90		
																								OOZEN	5.20		
																								OOZEN	1.95	1.65	1.00
																								OOZEN	2.30 1.50	1.65	1.00
G-22			-	-	-	-		-	•	•	-	•	 				 _	_	 	_			PEH		1.30	1.30	

## BRASS GAS FIXTURE FITTINGS. EXTRA HEAVY.









G-50. DOUBLE PENDANT.

SIZE					-											IN	CHES	1 x ₽	‡ x ‡	8 x 8	§ x ‡
																	EACH	1.80		1.80	1.80
G-51 G-52																		1.20	1.20	1.20	1.20
G-53								-		-		-		-	-	-	EACH	1.20		1.20	









G-54. BRACKET, SWING JOINT.

G-55. DOUBLE SWING.

G-56. SINGLE SWING.

G-57. HOSE COCK.

SIZE INCHES	1 z 1	1 x 1	1 x 1	5 x 1	3 x ‡	3 x 2
G-54		1.50 1.20	1.20	1.50	1.20	1.20
G-56	1.00	1.00	1.00 1.20	1.00	1.00 1.20	1.00









G-58. MALE LAMP POST.

G-59. FEMALE LAMP POST.

G-60. CHICAGO PATTERN.

G-61. ALCOHOL CUP.

SIZE	. INCHES	1	2	1 1	3	1
G-58	EACH	.80	.85	.90	1.00	1.15
G-59		.80	1.05	.90	1.00	1.15
G-60		1.00	1.00	1.15	1.25	1.40

# STANDARD STAPLE GAS BRACKETS.

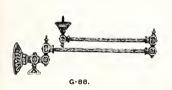
FINISHED IN FRENCH BRONZE OR GILT.







		_	_	_	_		_	-			-	 	_	_	_	_	_	-	 	_	 _	_		
G-85.	STRAIGHT BRACKET, STIFF								 				 										EACH	.45
G-86.	CURVE BRACKET, STIFF .	-	-			-			 	_		ż	 				_		 				EACH	. 50
G.87.	SINGLE SWING BRACKET .	-																						.55





ſ			 	=	_	 -	 _			 _	_	_		_	_	_	 _	_	_	 _	=	_	_		T		
ľ	G-88.	DOUBLE SWING BRACKET								 											_			EACH	1	. 80	)
U	G-89.	TRIPLE SWING BRACKET								 														EACH		1.15	5
1																									_		_





		 -						_			 _		_	_		 _	_	_	_					
G-90.	DOUBLE SWING UNIVERSAL BRACKET			_												 					EACH	1	. 15	
G-91.	TRIPLE SWING UNIVERSAL BRACKET														_	 					EACH	1 1	.40	
			_		 _	-	٠		_	_	-	-	-											

Above prices include Cup, Back Pillar, and Tip.

# GAS BRACKETS, WITH SQUARE FITTINGS.

POLISHED BRASS.



G-100. CURVED BRACKET.



G-101. CURVED BRACKET.



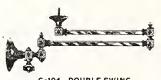
G-102. RING BRACKET.

## POLISHED CURVED BRACKETS, SQUARE OR ROPE TUBE.

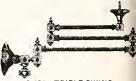
G-100 AND G-101.	STIFF CURVED BRACKET	S .	 			 	 					EACH	.95	
G-102. STIFF RIN	G BRACKETS		 			 				-	 -	EACH	1.50	



G-103. STRAIGHT BRACKET.



G-104. DOUBLE SWING.



G-105. TRIPLE SWING.

## POLISHED BRACKETS, SQUARE OR ROPE TUBE.

STRAIGHT BRACKET, STIFF					
SINGLE SWING BRACKET					
DOUBLE SWING BRACKET	~	 	 	EACH	1.25
TRIPLE SWING BRACKET		 	 	EACH	1.65

Above prices include Cup, Back, Pıllar, and Tip.



G-115. GLOBE HOLDER.



G-118. BRACKET BACK.



## GLOBE HOLDERS.-G-115.

s	ZE	 -	 -	 	 	-	 -	-	-	 	-	-	-		-	-	 -	 IN	CHES	4	5	
Р	ER DÖZEN	 		 -	 	-	 -	-	-	 -	-	-		-	-	-		 -		1.25	1.50	

#### BRACKET BACKS.-G-118.

SIZE	24	3
PER DOZEN	. 50	.60

#### BURNER CUPS .- G-121.

- 1		
1	PER DOZEN	.20









2.50







G-150.

G-152. FISH TAIL BURNERS

G-156. JUMBO, 60-CANDLE POWER .

IRON BURNERS.

mon benne		
 BAT WING MILL BURNERS. BILLIARO BURNERS.	PER OOZEN	,60

. PER DOZEN

PER OOZEN

BRASS BURNERS.

G-160.	COMMON BRASS BURNERS . PER OOZEN	.50
G-164.	CLOUGH GASOLINE BURNERS, IRON TIP. PER OOZEN	5.00
G-164.	CLOUGH GASOLINE BURNERS, LAVA TIP. PER OOZEN	5.50
G-168.	MAXIM, FOR GAS MACHINE PER DOZEN	4.00















BRAY'S SPECIAL BURNERS.

G-172.	UNION JET, SIZES 00000 TO 9 . PER GROSS	5.50
G-173.	SLIT UNION, SIZES 2 TO 9 PER GROSS	5.50
G-174.	BAT WING, SIZES 000 TO 9 PER GROSS	5.50
BRASS	PILLARS FOR ACETYLENE TIPS PER GROSS	2.00

BRAY'S TIPS, LAVA.

G-178.	UNION JET, SIZES OO TO 7 PER GROSS	2.00
G-179.	SLIT UNION, SIZES 2 TO 8 PER GROSS	2.50
G-180.	BAT WING, SIZES 000 TO 8 PER GROSS	2.25
G-181.	ACETYLENE, SIZES 000, 0000, 00000 . PER GROSS	5.00











G-197.



G-198.







		_	_					_		=			
G-185.	STANDARD,	SI	ZES	1	Т	3 C	3	FEI	ĒΤ		PER	GROSS	2.00
G-189.	FISH TAIL										PER	GROSS	2.00
G-193.	8AT WING										PER	GROSS	2.00

L	A	v	А	ı	ı٢	Э.	
-	_	_	_	_	_	_	

G-197. WATER GAS ..... PER GROSS 2.00

	IRON AND BRASS T	TPS.
G-198.	E.H., NICKEL PLATED	PER GROSS 4.00
G-200.	BAT WING, IRON	PER GROSS 2.50
G-201.	FISH TAIL, IRON	PER GROSS 2.50
G-202.	SIGN TIP, 8RASS	PER GROSS 3.00











EMPIRE.

G-218. AMERICAN CHECK

BURNERS, PILLARS, ETC.

FIGURE	G-210	G-211	G-214	G-215	G-218
PER DOZEN	1.00	.75	. 20	. 50	.60











G-225. STYLE A.

G-226, STYLE B

G-227. STYLE C.

G-228, STYLE D.

## STARR ACETYLENE BURNERS.

STYLE	 A	В	C.	D
PER DOZEN	 2.50	2.50	1.25	2.50

All styles made in five sizes - 1/8, 1/4, 1/2, 1/4 and 1 foot - and will give best results under a 2-inch pressure. Samples, 25 cents each, net.









G-232,

ARGAND SHADE HOLDER, 8, 10 AND 12-INCH.



ARGAND BURNERS, HOLDERS AND CHIMNEYS.

G-234. ARGAND CHIMNEY, 8, 7 AND 8 INCHES LONG.

FIGURE	G-230	G-232	G-234, Glass	G-234, Mica	
PER DOZEN	7.00	2.00	1.50	7.00	







DROP LIGHT SOCKET. PORTABLE CONNECTION.





UNION FOR MOHAIR.

FIGURE	G-245	G-247	G-249	G-252
PER DOZEN	2.50	2.50	1.75	1.50





G-254 TUBE CONNECTION. MALE REFLECTOR NIPPLE. REFLECTOR NIPPLE FOR LAVA TIP.

G-260. BRASS NIPPLE.

FIGURE	G-254	G-256	G-258	G-260
PER DOZEN	1.50	. 40	. 40	. 60







G-263. CLEANER FOR BATWING BURNER.

	_	_		_	_	_		
FIGURE							G-262	G-263
PER DOZEN							1.25	. 50





G-265. THORP GAUGE



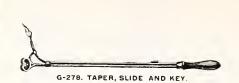
G-267. POCKET TEST METER.

# FOR TESTING PRESSURE AND CONSUMPTION OF GAS.

To those unfamiliar with the working of the "Thorp Dry Pressure and Burner Tester"—commonly called the Thorp Gange-we will say in explanation, that it is a very ingenious, simple instrument, scientifically constructed, and mathematically correct. The cut, which is exactly half size, shows the Gauge as it is furnished by us, the "Pressure" cap at top being in place.

To test cousumption of a burner, the Pressure cap is unscrewed and the hurner is screwed in its place; the gas is turned on and lighted at burner; the black indicating disc rises within the tube (just as in testing for pressure), and when the disc is at rest, the Right hand scale will show number of feet and fractions thereof of gas consumed per hour by the hurner.







G-275. WN SELF-LIGHTING BURNER.

G-281, CIGAR LIGHTER.

FIGURE	G-275	G-278	G-28
PER DOZEN,	5.00	6.00	24 0
WAX TAPERS		. 15	

Cigar Lighters are complete, with 2 feet of fancy colored gas-tight tubing, goose-neck, brass pillar, etc. Handles are of glass in colors, rnby, amber, blue, opal, or clear.



G-284, MOHAIR TUBING.



G-287, WIRE GUARD.

MOHAIR TUBING AND WIRE GUARDS.

G-284. MOHAIR TUBING	.12
ELEVATOR TUSING	эт .40
G-287. WIRE GUARDS	N 7.00

Mohair Tubing can be furnished in any length from 2 feet up. Box contains 96 feet.









G-290. G-293. G-298.
MONITOR GAS STOVE. NOVELTY HEATING BURNER. ATMOSPHERIC HEATER. MONITOR STAND.
MONITOR GAS STOVES, BURNERS, HEATERS, AND STANDS.

FIGURE	G-290	G-290	G-290	G-293	G-296	G-298	G-298	G-298
DIAMETER INCHES	$\frac{4\frac{3}{4}}{1.20}$	$\frac{6\frac{1}{2}}{1.50}$	$\frac{7\frac{1}{2}}{2.00}$	. 40	. 35	Small .35	Medium .60	Large .85







G-316. BY-PASS FOR INCANDESCENT LIGHT.

G-310. BUNSEN BURNER. G-312. MONITOR BURNER, ALL IRON. FOR
BUNSEN AND MONITOR BURNERS AND BY-PASSES.

BUNSEN BURNERS	 	 						 			. PER DOZEN	9.00
MONITOR BURNERS, DIAMETER									INCHES	2½ 4.50	3 <del>1</del> 9.00	4 ½ 10.00
MONITOR BURNERS		 	_	 -	-	 	_			1	PER DOZEN	4.50



G-320. MICA SMOKE CATCHER, FOR ARGAND CHIMNEYS.

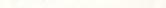


G-322. MICA CANOPY, FOR ARGAND CHIMNEYS.



G-324. MICA CANOPY, FOR 6-INCH GLOBES.







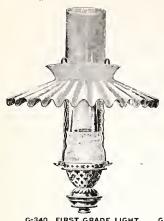
G-328: PORCELAIN SMOKE SHADE.

## SMOKE SHADES, ETC.

FIGURE	G-320	G-322	G-324	G-326	G-328
PER DOZEN	2.50	3.00	4.50	4.50	3.00

#### OPAL DOME SHADES, FOR ARGAND BURNERS. (NOT ILLUSTRATED.)

ı	<del></del>		
	DIAMETER, 10 INCHES	 PER DOZEN	7.50







G-340. FIRST GRADE LIGHT. G-342 FIRST GRADE MANTLE. G-344. SECOND GRADE LIGHT.

#### WELSBACH LIGHTS AND MANTLES.

G-340. COMPLETE		EACH	1.25 1.00
MANTLES, FIRST GRADE	40	MANTLES, SECOND GRADE EACH	.30

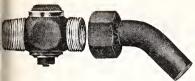




G-248 FIRST GRADE LIGHT

ſ				 		
1	G-346. COMPLETE				EACH	1.40
1	G-348. COMPLETE				EACH	1.35
п	00.0.0					

### CORPORATION STOP-COCKS.







H-2. STRAIGHT COUPLING, SCREW PLUG.

# CORPORATION COCKS, SCREWED FOR MUELLER TAPPING MACHINE.-H-1 and H-2.

SIZE INCHES	3.8	1/2	\$	3	1
H-1	1,20	1.35	1.70	2.50	3.85
	1.20	1.35	1.70	2.50	3.85

H-1 is considered the standard, and is always furnished unless other style is ordered.



H-3. SCREW PLUG, I. P. THREAD ON LONG END.



H-4. SCREW PLUG. I. P. THREAD ON LONG END.

#### CORPORATION COCKS, IRON PIPE THREAD ON LONG END .- H-3 and H-4.

SIZE		 		-						INCHES	3 8	1/2	5	3	1
										. EACH		1.55	1.90 1.90	2.80	4.40



H-5. THREADED I. P. ON BOTH ENDS, NOT THREADED FOR SCREW PLUG.



H-6. THREADED I. P. ON SHORT END, MUELLER THREAD ON LONG END, FITTED FOR SCREW PLUG.



H-7. THREADED I. P. ON SHORT END, COARSE THREAD FOR WOOD MAIN.

#### CORPORATION COCKS, FOR IRON PIPE AND WOOD MAIN.-H-5, H-6, and H-7.

	SIZ	Ε		-												-			 			NCHES	3 8	1/2	5 8	3 4	1
	H-5	i .																				EACH EACH	1.05	1.30	1.65	2.40	3.80
H	H-6	۶.						-										-		-		EACH		1.10	1.40	2.10	3.35
	H-7					٠	·		-	_	_	_								-	٠	EACH		1.50	1.90	2.70	4.10

## CORPORATION STOP-COCKS.



H-8. COARSE THREAD ON LONG END,



H-9. COARSE THREAD ON LONG END, FOR WOOD PIPE.

## CORPORATION COCKS, FOR WOOD PIPE.-H-8 and H-9.

SIZE														-	_		-	-				 		D	CHES	200	I	÷	ě	2		1
H-8					_																				EACH			1.65	2.00	3.00	4	70
H-9				-					٠	-	٠.	-	v			-			-	-	-				EACH			1.65	2.00	3.00	4.	.70



H-20. BENT COUPLING FOR PAYNE MACHINE.



H-21. STRAIGHT COUPLING FOR PAYNE MACHINE.

#### CORPORATION COCKS, FOR PAYNE TAPPING MACHINE.-H-20 and H-21.

SIZE INCHES	3.	1/2	2	3	1	1 ‡	1 }	2
H-20	1.20	1.35	1.70	2.50	3.85	8,00	10.67	18.34
H-21	1.00	1.35	1.70	2.50	3.85	8.00 6.75	8.35	15.00



H-22. FOR CLOW PATENT LEAD PIPE CONNECTION, MUELLER MACHINE.



H-23. FOR CLOW LEAD PIPE CONNECTION, PAYNE MACHINE.

## CORPORATION COCKS, FOR CLOW CONNECTION.-H-22 and H-23.

SIZE		g	1/2	Ĥ	2	1
	FOR MUELLER MACHINE . EACH FOR PAYNE MACHINE . EACH	1.40	1.55 1.30	1.90 1.65	2.70 2.40	4.05 2.80



H-33. LEAD GOOSE NECKS.

#### LEAD GOOSE NECKS, COMPLETE.

			,		
SIZE	흅	1/2	5 8	4	1
EACH	1.40	1.50	1.70	2.00	2.70

Our Lead Goose Necks are made from extra strong lead pipe, 18 inches long, with Corporation Stop Cock (either screw or hexagon), wiped on one end and male brass soldering nipple on the other. This length is considered standard, but they are made in special lengths when desired. Joints wiped by practical plumbers. Thoroughly tested to a high water pressure.



H-37. CLOW WATER CONNECTION.
PATENT APPLIED POL



#### CLOW WATER CONNECTIONS.-H-37.

NUMBER	1	2	3	4
SIZE OUTLET CONNECTION _ INCHES	1	1}	$1\frac{1}{2}$	2
NUMBER OF 34-INCH BRANCHES	2	3	4	
NUMBER OF 1-INCH BRANCHES				4
PRICE EACH	1.75	2.50	3.00	5.00

This Connection is intended for use where a 1-inch Connection or larger is to be made and main cannot be tapped for Corporation Cock larger than  $\frac{3}{6}$  or 1 inch. The 1-inch Connection has two branches, the  $\frac{1}{4}$  has three, and the  $\frac{1}{4}$  Connection has four 1-inch branches.

When the Connection is set about 18 inches from the main, the distance between each tap in main would be about 12 necess.

The inlet Connections are all made for use with lead or iron pipe to the main, and have union joints. The outlet

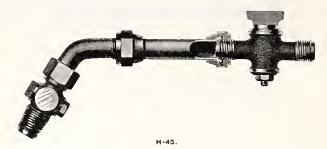
Connection is also made with union joint and for lead or iron pipe.

Wherever used they give excellent satisfaction, and are a great improvement over the old method of making large

connections, and are much cheaper.

#### CLOW PATENT LEAD PIPE CONNECTION.

SHOWING CORPORATION COCK AND ROUND-WAY STOP, WITH LEAD PIPE CONNECTED.



We guarantee a joint made with this Connection is stronger and more durable than the regular solder joint, and much cheaper. Any one capable of tapping a main can make a perfect joint with this Connection in a few minutes, and in any place where lead and iron pipe are to be connected it will be found more satisfactory and cheaper than the solder joint.







TEE HANDLE ROUND-WAY STOPS.-H-46.
IRON PIPE BOTH ENDS, FOR CLOW PATENT LEAD PIPE CONNECTIONS.

SIZE INCHES	1	578	à	1
PER DOZEN	19.00	23.00	28.00	48.00







H-47.

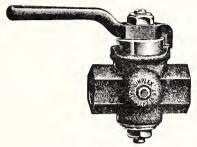
#### CLOW PATENT LEAD PIPE CONNECTIONS.- H-47.

SIZE	INCHES	4 8	1	1
EACH		. 15 . 20	.25	.35

Steel Expander for spreading pipe in connection, each, 65 cents.

#### SIMPLEX PATENT ROUND-WAY STOPS.

STEAM METAL, TESTED TO 200 POUNDS PRESSURE. EVERY ONE WARRANTED.



H-60. LEVER HANDLE, WITH CHECK AND WASTE.

Simplex Patent Stops, and Stop and Waste Cocks, can be instantly changed from right to left hand, or vice versa, by unscrewing nut on top and reversing the handle. Is it set right? is a question never asked of the Simplex. It is impossible to set it wrong. The handle must always be parallel with the pipe when cock is open, and at right angles with pipe when water is shut off. It cannot be set in any other way than the right way, and a child can change it in half a minute. Handles are interchangeable. Lever handles are made of mullcable iron.







SIMPLEX ROUND-WAYS, WITH CHECK AND WASTE.-H-60 and H-61.

5							
	SIZE INCHES	1/2	ą	3	1	1;	11/2
	TEE OR LEVER HANDLE PER DOZEN	22.00	26.50	31.50	53,00	81.50	116.50

#### SIMPLEX ROUND-WAY STOPS, FOR IRON PIPE.-H-62 and H-63.

SIZE	$\frac{1}{2}$	8	3	1	11	1 ½
TEE OR LEVER HANDLE	20.00	24.50	29.50	50.00	77.50	110.50

Descriptive circular sent upon application.

# SIMPLEX PATENT STOP COCKS.

FOR IRON PIPE.



TESTED TO 200 POUNDS PRESSURE EVERY ONE WARRANTED.

H-70. LEVER HANDLE STOP AND WASTE.

Simplex Flat-Way Stops, and Stop and Waste Cocks, are constructed same as the Simplex Round-Ways, described on previous page. They are thoroughly reliable, and we guarantee them to be superior to any other reversible stop cock made. Lever handles are made of malleable iron.







H-72. LEVER HANDLE STOP.



H-73. TEE HANDLE STOP.

#### SIMPLEX STOPS, WITH CHECK AND WASTE .- H-70 and H-71.

SIZE	1/2	ā.	4	1
TEE OR LEVER HANDLE	18.00	21.50	25.50	37.00

#### SIMPLEX STOPS, FOR IRON PIPE.-H-72 and H-73.

SIZE	ES ½	18	3	1
TEE OR LEVER HANDLE	EN 16.00	19.50	23.50	34.00

Instantly changed from right to left hand, by unscrewing the nut on top and reversing the handle. Handles are interchangeable.









H-88. L. H. ROUND-WAY.

## ROUGH STOPS, ROUND-WAY, FOR IRON PIPE.-H-85 and H-88.

SIZE INCHES	1/2	Ą	3	1	11	11/2	2
H-85. STOPS WITH CHECK AND WASTE PER DOZEN PER	21.00 20.00	23 00 25 00 24 50 26 50	28 00 30 00 29 50 31 50	51.00 50.00	79 00 77.50	107.00 113.00 110.50 116.50	200,00 195.00

## ROUGH STOPS, FLAT-WAY, FOR IRON PIPE. H-91 and H-94.

SIZE	INCHE	å	1/2	ago.	4	1	1.}	11	2
H-91.	STOPS PER DOZE STOPS, WITH CHECK AND WASTE PER DOZE STOPS. PER DOZE STOPS, WITH CHECK AND WASTE PER DOZE	15 00	17.00	20 00	24 00	35 00	55 00	77.00	130.00
H-94.		14,00	16.00	19 50	23 50	34 00	53.50	74.50	125.00







H-1DD. L. H. NEWPORT.



H-103. MINNEAPOLIS PATTERN.

### SPECIAL ROUND-WAY STOPS, FOR IRON PIPE.

SIZE INCHES	1/2	ŧ	3 4	1
TEE HANDLE STOPS.  TEE HANDLE STOPS, WITH CHECK AND WASTE  LEVER HANDLE STOPS.  LEVER HANDLE STOPS, WITH CHECK AND WASTE  PER 00ZEN  PER 00ZEN	12 00	17 00	18.00	30.00
	14 00	19:00	20.00	33.00
	13 00	18:50	19.50	32.00
	15 00	20:50	21.50	35.00



H-120. T. H. MALE AND FEMALE



H-121. L. H. MALE AND FEMALE.



H-126. HYDRANT COCK, HEAVY PATTERN.

# ROUGH STOPS AND HYDRANT COCKS, FOR IRON PIPE.

SIZE INCHES	ž	5	1	1	114	1 ½	2
H-120. T. HANDLE STOPS		18.00 20.00 19.50 21.50 24.00	22.00 24.00 23.50 25.50 29.50	32.00 35.00 34.00 37.00 50.00	51.00 55.00 53.50 57.50 60.00	71.00 71.00 74.50 80.50	120.00 130.00 125.00 135.00



H-130. IMPROVED BALL COCK.



H-135, RAIN AND WELL WATER COCK.

## IMPROVED BALL COCKS, FOR IRON PIPE.-H-130.

SIZE INCHES	1/2	5/2	3	1	11	1 ½	2
H-130	12.00	14.00	20.00	34,00	56.00	80.00	150.00

## RAIN AND WELL WATER COCKS, FOR IRON PIPE.-H-135.

SIZE INCHES	3	1	11	1 ½	2
H-135	56,00	79.00	96.00	138.00	230.00



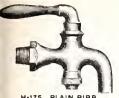
H-140. WITH LEVER.



H-141. WITH SPUD TAPPED, FOR IRON PIPE

#### COPPER BALLS .- H-140 and H-141.

SIZE .	INCHES	5	6	7	8	9	10	12
	EVER PER DOZEN SPUD THREADED, FOR IRON PIPE . PER DOZEN		7.00 6.00	10,50 9.00	24.00 15.00	36.00 25.00	48.00 40.00	72.00 -60.00









## LEVER HANDLE PLAIN AND HOSE BIBBS, FOR IRON PIPE.

INCHES	1	3 1	1/2	5 8	8	1	11	1 ½	2
PER DOZEN	12.00	14.00	17,00	20.00	26.00	39.00	64.00	90.00	180.00
ATED PER 00ZEN	14.00	16.00	19.50	22.50	28.50	42.00			
. PER OOZEN	11.00	13.00	16.00	18.00	23.00	35.00	56.00	78.00	160.00
PER OOZEN			19.00	22.00	28.00	42.00	68.00	96.00	190.00
ATED PER DOZEN			21.50	24.50	30.50	45.00			
PER 00ZEN			18.00	20.00	25.00	38.00	60.00	84.00	170.00
	ATED PER OOZEN PER OOZEN PER OOZEN PER OOZEN ATEO PER OOZEN	PER OOZEN 12.00 ATED PER OOZEN 14.00 PER OOZEN 11.00 PER OOZEN 11.00	PER 00ZEN 12.00 14.00 ATED PER 00ZEN 14.00 15.00 PER 00ZEN 11.00 13.00 PER 00ZEN	PER OOZEN 12.00 14.00 17.00 ATED PER OOZEN 14.00 16.00 19.50 PER OOZEN 11.00 13.00 16.00 PER OOZEN 11.00 13.00 19.00 ATED PER OOZEN	PER 00ZEN 12.00 14.00 17.00 20.00 ATED PER 00ZEN 14.00 16.00 19.50 22.50 PER 00ZEN 11.00 13.00 16.00 18.00 PER 00ZEN 11.00 13.00 22.00 ATED PER 00ZEN 12.00 24.50	PER 00ZEN 12.00 14.00 17.00 20.00 26.00 ATED PER 00ZEN 14.00 16.00 19.50 22.50 28.50 PER 00ZEN 11.00 13.00 16.00 18.00 23.00 PER 00ZEN 11.00 19.00 22.00 28.00 ATED PER 00ZEN 12.00 19.00 24.00 30.50	PER 00ZEN 12.00 14.00 17.00 20.00 26.00 39.00 ATED PER 00ZEN 14.00 16.00 19.50 22.50 28.50 42.00 PER 00ZEN 11.00 13.00 16.00 18.00 23.00 35.00 PER 00ZEN 11.00 13.00 16.00 22.00 28.00 42.00 ATED PER 00ZEN 12.20 19.00 22.00 28.00 42.00 ATED PER 00ZEN 21.50 24.50 30.50 45.00	PER ODZEN 12.00 14.00 17.00 20.00 26.00 39.00 64.00 ATED PER ODZEN 14.00 16.00 19.50 22.50 28.50 42.00 PER ODZEN 11.00 13.00 16.00 18.00 23.00 35.00 56.00 PER ODZEN 19.00 22.00 28.00 42.00 68.00 ATED PER ODZEN 21.50 24.50 30.50 45.00	PER ODZEN 12.00 14.00 17.00 20.00 26.00 39.00 64.00 90.00  ATED PER ODZEN 14.00 16.00 19.50 22.50 28.50 42.00  PER ODZEN 11.00 13.00 16.00 18.00 23.00 35.00 55.00 78.00  PER ODZEN 19.00 22.00 28.00 42.00 68.00 96.00  ATED PER ODZEN 21.50 24.50 30.50 45.00

## PLAIN STOPS, LEVER HANDLE, FOR IRON PIPE.-H-186.

SIZE	INCHES	â.	1/2	5 8	<u> </u>	1
H-186. FINISHED	PER OOZEN	17.50 19.50	$\frac{19.50}{22.00}$	$\frac{23.00}{25.50}$	29.50 32.00	43.00 46.00



H-196. PLAIN BIBB.



H-197. HOSE BIBB.



## COMPRESSION BIBBS, FOR IRON PIPE.

SIZE	. INCHES	3 8	1/2	5,7	3.	1	11	11/2	2
H-196. PLAIN BIBBS, FINISHED									
H-196. PLAIN BIBBS, NICKEL PLATED .									
H-197. HOSE BIBBS, PLAIN									180.00
H-197. HOSE BIBBS, NICKEL PLATED .	. PER DOZEN	16.00	17.50	19.50	24.50	43.00			

## COMPRESSION PLAIN OR HOSE BIBBS, WITH STUFFING-BOX.

SIZE INCHES		1/2	Ę	3	1
ADD TO ABOVE LISTS	2.00	2.00	2.00	3.00	4.00



H-21D. PLAIN BIBB, LOOSE KEY.



H-211. HOSE BIBB, LOOSE KEY.

# COMPRESSION BIBBS, WITH LOOSE KEY, FOR IRON PIPE.

H-210. FINISHED PER OOZEN 1			
	19.00 21.00 21.50 23.50	27.00 29.50	45.00
H-211. FINISHED PER DOZEN 2	21.00 23.00 23.50 25.50	29.00 31.50	48.00



H-215. PLAIN STOP.



H-220. STOP, WITH STUFFING-BOX.



H-225. PLAIN STOP, LOOSE KEY

## COMPRESSION STOPS, FOR IRON PIPE.-H-215.

SIZE INCHES	3	<del>j</del>	ş	3	1
FINISHED . PER DOZEN NICKEL PLATED . PER DOZEN	13.00	14.00	16.00	24.00	40.00
	15.00	16.50	18.50	26.50	43.00

## COMPRESSION STOPS, FOR IRON PIPE, WITH STUFFING-BOX.-H-220.

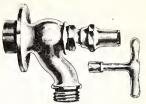
SIZE INCHES	38	j	ş	34	1
FINISHED	15.00	16.00	18.00	27.00	44.00
	17.00	18.50	20.50	29.50	47.00

## COMPRESSION STOPS, LOOSE KEY, FOR IRON PIPE.-H-225.

SIZE INCHES	1/2	ŧ	3	1
FINISHED PER DOZEN NICKEL PLATED	20.00 22.50	22.00 24.50	31.00 33.50	48.00 51.00







H-236. SILL COCK, LOOSE KEY.

SILL COCKS.-H-235 and H-236.

SIZE	1/2	3 4
H-235.         FINISHED         PER 00ZEN           H-235.         NICKEL PLATED         PER D0ZEN           H-236.         FINISHED, LOOSE KEY         PER D0ZEN           H-236.         NICKEL PLATED, LOOSE KEY         PER D0ZEN	28.00 32.00 34.00 38.00	28.00 32.00 34.00 38.00



H-245, BOSTON PLAIN BIBB.



H-250. DOHERTY PLAIN BIBB.

## BOSTON SELF-CLOSING PLAIN BIBBS, FOR IRON PIPE.

SIZE	38	1/2	8
H-245. FINISHED . PER DOZEN   H-245. NICKEL PLATED . PER DOZEN	25.00	28.00	31.00
	29.00	32.00	35:00

## DOHERTY SELF-CLOSING PLAIN BIBBS, FOR IRON PIPE.

SIZE INCHES	8	<u>1</u>	5 8
H-250. FINISHED PER OOZEN H-260. NICKEL PLATED PER DOZEN	27.00	27.00	30 00
	33.00	33.00	36.00



H-255. TELEGRAPH BIBB.

## TELEGRAPH SELF-CLOSING BIBBS.-H-255.

SIZE INCHES	8	1/2	<u>5</u>	3 4
FINISHED PER 00ZEN	16.00	18.00	21.00	28.00
NICKEL PLATED PER DOZEN	18.00	20.50	23.50	30.50



H-265. RACKING COCK, TO DRIVE.



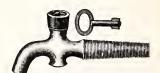
H-266. RACKING COCK, TO SCREW.

# RACKING COCKS.-H-265 and H-266.

SIZE	‡	30	4	å.	3 4	1
H-265. FINISHED PER 00ZEN H-266. FINISHED PER DOZEN	5.00	7.50	10.00	14.50	17.00	30.00
	5.50	8.00	11.00	16.00	19.00	32.50



H-267. LOCK COCK, TO DRIVE.



H-268. LOCK COCK, TO SCREW.

### RACKING COCKS.→H-267 and H-268.

SIZE INCHES	1	25	Ť	<u>5</u> H	3	1
H-267. FINISHED . PER DOZEN H-268. FINISHED . PER OOZEN	6.50	8.50	12.00	16.50	20,00	35.00
	7.00	9.00	13.00	18.00	22.00	37.50

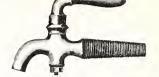


H-269. COOLER COCK

## COOLER COCKS.-H-269.

SIZE	ICHES 1	342	1/2
FINISHED PER D NICKEL PLATED PER D	DZEN 8.00	9.00	10.50
	DOZEN 9.50	10.50	12.00





H-275. LIQUOR COCK, TO SCREW.

H-276. KEROSENE COCK, TO SCREW.

#### LIQUOR COCKS, TO SCREW.-H-275.

SIZE INCHES	1	8	1/2	98	3	1
FINISHED PER DOZEN	9.50	11.50	15.50	19.50	26.00	38.50

We can also furnish these with tinned ends, to solder, at same price.

## KEROSENE COCKS, TO SCREW.-H-276.

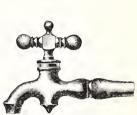
SIZE INCHES	8 8	1/2	5	2	1
FINISHED PER DOZEN	12.50	15,00	19.00	26.00	42.50



H-278. URN COCK, DROP HANDLE.



H-279. URN GAUGE.



H-28D. URN COCK, IVORY HANDLE.

## URN COCKS, DROP HANDLE.-H-278.

SIZE INCHES	1	76	38	10
FINISHED PER DOZEN NICKEL PLATED PER DOZEN SILVER PLATED PER DOZEN	28.00	30.00	32.00	36.00
	30.00	32.00	34.00	38.50
	35.00	38.00	41.00	48.00

## URN GAUGES.-H-279

NICKEL PLATED .	FACH   6.00
SILVER PLATED	

## URN COCKS, IVORY HANDLE .- H-280.

SIZE INCHES	1	8	16	1/2
FINISHED         PER DOZEN           NICKEL PLATED         PER DOZEN           SILVER PLATED         PER DOZEN	20.00	21.00	24.00	28.00
	22.00	23.00	26.50	30.50
	27.00	29.00	33.00	37.00



# H-3DD. UNDERWRITERS' HOSE PIPE. UNDERWRITERS' HOSE PIPES.—H-300.

SIZE	2	21/2	21/2	21/2
LENGTH         INCHES           WOUND AND PAINTED         £ACH           PLAIN BRASS         £ACH           WDUND AND PAINTED, WITHDUT HANDLES         £ACH           RUBBER TUBE, SWIVEL HANDLES         £ACH           LEATHER TUBES, SWIVEL HANDLES         £ACH	20 9.00 7.50 6.50	24 11.00 9.50 8.50	30 12.00 11.00 10.00 15.00	36 15.00 13.50 12.50 18.00 18.00





H-3D1. PLAIN HOSE PIPE.

PLAIN HOSE PIPES .- H-301.

,							
1	SIZE INCHES	3	1	11/4	11/2	2	21/2
١	PER DOZEN	3.50	4.00	6.40	15.00	21.50	28.50

## HOSE PIPES, PLAIN, SCREW TIP.-H-302.

SIZE INC	ES 3	3	1	1	11	1‡	1 ½	1½	2	2	$2\frac{1}{2}$	21/2
LENGTH INCI PER DOZEN		12 10.00	8 10.00	12 12.00	12 20.00	15 24.00	$\begin{array}{c} 12 \\ 25.00 \end{array}$	15 30.00	$\frac{12}{38.00}$	20 50.60	15 75.00	24 100.00





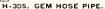


H-304. FULLER HOSE PIPE.

HOSE PIPES .- H-303 and H-304.

SIZE	. 3	3	1	1	1‡	11/2	2
LENGTH	8	12	8				
			15.00				110.00
H-304	18.00		30.00				







H-305. SHOWING SOLID STREAM.

GEM HOSE PIPES.-H-305.

SIZE	 		 	 	 	 	 	 INCHES	3 4	1
PER DOZEN		::-	 	 	 	 	 		10.00	15.00

Mose and Garden Valves, see page 79.

# HOSE GOODS.



H-315. ONE 2% MALE, WO 2% FEMALE LOOSE COUPLINGS.



H-316. TWO 2½ MALE, ONE 2½ FEMALE LOOSE COUPLING.



H-317. TWO 2½ MALE, ONE 4 FEMALE LOOSE COUPLING.



H-318. TWO 2½ MALE, ONE 4 FEMALE LOOSE COUPLING.

#### SIAMESE COUPLINGS.

FIGURE	H-315	H-316	H-317	H-318
EACH	13.00	10.00	14.00	30.00



H-325. SUCTION HOSE STRAINER.



H-329. FIRE HYDRANT HOSE REDUCER.



H-330. HOSE CAP.

## SUCTION HOSE STRAINERS (BRASS).-H-325.

SIZE INCHES	11	2	21/2	3	31	4	41	5	6
EACH	7.50	7.50	8.50	10.00	15.00	19.00	25.00	31.00	46.00

#### FIRE HYDRANT HOSE REDUCERS.-H-329.

SIZE INCHES	2½ x ¾	2½ x 1	2½ x 1¼	2½ x 1½	2½ x 2	3 x 2	3 x 2½
EACH	2.75	2.85	3.00	3.00	3.25	3.50	4.00

#### HOSE CAPS (BRASS) -H-330.

SIZE INCHES	3	1	11	11/2	2	21/2
EACH	. 35	.50	.70	.90	1.25	2.00

## HOSE GOODS.







H-345. STEAM COUPLING.



H-350. BENT COUPLING.

#### HOSE COUPLINGS .- H-340.

SIZE INCHES	1/2	3	1	11	14	2	21/2	3	3 1	4	5	6
PER DOZEN	2.65 1.80	2.65 1.80	4.65 3.00	10.50 7.20	15.00 9.60	$\frac{26.00}{16.20}$	50.00	79.00				

#### STEAM AND BENT HOSE COUPLINGS.-H-345 and-H-350.

SIZE	1 2	3 4	1	11	11/2	2	21
STEAM COUPLINGS . EACH H-350. BENT %-INCH ONLY . DOZEN	1.25	1.25 4.50	1.50	2.00	2.50	3.50	6.00



H-355, HOSE STRAP!







H-365, SHERMAN MENDER CLAMP.

# HOSE STRAPS AND FASTENERS.-H-355 and H-356.

NUMBER	5	4	6	8	10	12	14	16	18	20	22	24	26	28	30	3.5	34	36
SIZE INCHES	1/2	1 2	3	3	1	1	11	11	11	11/2	13	13	5	2	21	21	51	5 7
LENGTH INCHES	3 [	33	41	43	5	53	6	63	63	74	71	8	81	- 5	91	10	104	11
PER DOZEN	.40	.40	,60	.60	.80	.80	1.00	1.00	1.20	1.20	1.40	1.40	1.60	1.60	1.80	1.80	\$.00	

H-356.—Hose Strap Fastener, ½ to 1-inch, each 50 cents; 14 to 2½-inch, each 75 cents.

#### SHERMAN HOSE CLAMPS.-H-360.

SIZE INCHES	Ť	1 ·	į.	3	3	3	1	1	11	1 1	1 1	1-1-	2	2	2 ½	2₺
HOSE-PLY	.60	3 . 60	.60	.60	3 . 60	. 60	3 2.00	4 2.00	3 2.50	4 2.50	3 3.00	4 3.00	3 4.00	4 4.00	3 7.00	7.00

## SHERMAN CLAMPS FOR STEAM HOSE, HEAVY .- H-360.

ĺ	SIZE INCHES	3	3	1	1	1}	1}	11/2	11/2	11/2	2	5
	HOSE-PLY	3 2.00	4 2.00	3 2.50	4 2,50	3 3.00	4 3.00	3 3.50	3.50	5 3.50	3 5.50	4 5.50

H-365 -Sherman Double or Mender Clamps, 1 or 1 inch, per dozen, \$2.40.







H-376. REDUCER.



H-377. MALE NIPPLE.



H-378. FEMALE NIPPLE.



H-379. HOSE BIBB END.

## HOSE BUSHINGS AND REDUCERS-H-375 and H-376.

SIZE INCNES	1 x 3	1‡ x 1	1‡ x 3	1½ x 1¼	1½ x 1	1½ x 3/4	2 x 1 ½	2 x 14
PER DOZEN	6.50	10.00	10.00	12.00	12.00	12.00	18.00	18:00

Hose Bushings and Reducers have hose thread on both Male and Female ends.

# HOSE NIPPLES AND HOSE BIBB ENDS.-H-377, H-378, and H-379.

SIZE INCHES	<u> </u>	\$	3	1	1‡	1 <u>}</u>	2	$2\frac{1}{2}$	3
H-377 AND H-378 PER DOZEN H-379 PER OOZEN	3.50 2.50	2.50	3.50 2.50	5.00 3.50	9.00 6.00	10.00 8.00	14.00 15.00	28.00 24.00	40.00

Male Hose Nipples have hose thread on one end and iron-pipe thread on other end; except 3-inch, both ends for iron-pipe. Female Hose Nipples have hose thread on Male end; iron-pipe thread on Female end.



H-38S. HOSE MENDER.



H-390. ROSE SPRINKLER.

#### HOSE MENDERS.-H-385.

SIZE INCNES	1/2	3 4	1
PER DOZEN	1.20	1.20	2.50

#### ROSE SPRINKLERS.-H-390.

DIAMETER INCHES	2	5‡	21	3
SIZE THREAD INCNES PER DOZEN	$\frac{\frac{3}{4}}{4.50}$	3 5.25	$\frac{1}{6.00}$	11 9.00







H-392, NOZZLE, FOR IRON PIPE.



H-39S, FOUNTAIN HEAD.

#### HYDRANT NOZZLES AND FOUNTAIN HEADS.

SIZE INCHES	<u> </u>	3	1
H-391. BRASS . PER DDZEN H-392. BRASS . PER DOZEN	7.00 8.00	8.50 9.50	10.00 11.00
H-395. TO SCREW ON 1/2-INCH IRON PIPE	1.50	2.00	

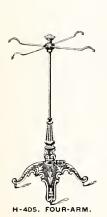
## HOSE GOODS.



H-400. FOUNTAIN SPRINKLER.

# FOUNTAIN LAWN SPRINKLERS.-H-400.

FINISHED BRASS	(-	6			_		-					_	_	-	_	_	_	 _	-	_		_	 		_	_	EACH	2.50	
NICKEL PLATED	-				-	-	-	-	-			-	-	-	-			 -	-	-	-	-	 -	-	-	-	EACH	3.50	









H-407. EIGHT-ARM, WITH BALL AND BASKET.

## STANDARD LAWN SPRINKLERS.

EIGHT-ARM		_	 	_	 	_	- '	 _		 			-	_	_		EACH	6.50 7.50
FOUR-ARM, WITH BALL AND BASKET EIGHT-ARM, WITH BALL AND BASKET _	-	-	 	-	 	_	-		 ~	 	-	 	-	-	-	-	EACH EACH	13.00 14.00

#### PARTS FOR STANDARD LAWN SPRINKLERS.

TOPS ONLY, FOR FOUR OR EIGHT ARM SP	RINE	KLE	R	~	***	 	_	_	 	_	_	_		 _	_	_	 	EACH	2.00
STAND ONLY, FOR FOUR OR EIGHT ARM S																			1.00
LONG ARM																			.35
SHORT ARM				-		 						-	_			-	 	. EACH	.25
BASKET						 		_	 							_	 	EACH	.75
BALL		_		_		 			 					 _	_	_		EACH	.75

## LAWN SPRINKLERS.







H-415. CYCLONE, ADJUSTED TO CIRCLE. H-415. ADJUSTED TO 15 CIRCLE BY TURNING THE KNOB.

## CYCLONE ADJUSTABLE LAWN SPRINKLERS.-H-415.

1.25 EACH



H-420. CACTUS SPRINKLER.



H-420. TO LIE ON GROUND.





FOUNTAIN OR IRRIGATING HEAD.

#### CACTUS SPRINKLERS.

FIGURE	H-420	H-421	H-422
FOR 11-INCH IRON PIPE CONNECTION FOR 31-INCH HOSE CONNECTION FOR 1-INCH HOSE CONNECTION LARGE PATTERN, FOR PARK USE, 1-INCH CONNECTION	1.50	2.00 2.50 3.00	1,50 2,00 2,50



H-430. INVERTED ROSE



H-433. UMBRELLA AND FOUR-ARM REVOLVING.



H-431. UMBRELLA.



H-434. FOUR-ROSE, FOUR-ARM REVOLVING AND ROSE.



H-432. FOUR-ARM REVOLVING



H-435, COMBINATION ROSE.



H-436. EIGHT PRONGS.

We do not guarantee Jets to operate precisely as shown, on account of varied pressures under which they may be used, and cannot accept their return on this account.



H-437. DOUBLE REVOLVING AND ROSE.

## FOUNTAIN JETS.

FIGURE	H-430	H-431	H-432	H-433	H-434	II-435	H-436	H-437
15-INCH         EACH           16-INCH         EACH           15-INCH         EACH	13.00	6,00 6,75 7,75	7,50 9,00 10,00	16.00	16.00	7.00	4.00	12.00 15.00



H-480. WIZARD SPRINKLER.

## WIZARD LAWN SPRINKLER.: H-480.



H-481. CLAMP FOR ROD.



H-482.



H-483. PATENT CLAMP.



H-484.

# MALLEABLE HYDRANT CLAMPS AND SOCKETS.

H-481			PER POUND .15
H-482	TAPPED FOR %-INCH IRON PIPE .		PER POUNO .18
H-482.	TAPPED FOR 12-INCH IRON PIPE .		PER POUND
H-483	TAPPED FOR 48 OR 15-INCH IRON PI	PE	PER OOZEN 1.25
H-484			PER POUND .15





H-492. HYDRANT KEY.



H-494. ROD REST.



H-496.	ROD	HANDL	E.
--------	-----	-------	----

H-490.	MALLEABLE IRON		 PER POUNO	.15
H-490.	SMALL PATTERN, FOR IRO	N STREET WASHER	 EACH, NET	.15
			PER OOZEN	5.00
H-492.	MALLEABLE IRON		 PER POUNO	.15
			PER OOZEN	
H-496	MALLEABLE IRON		 PER OOZEN	2.00
H-496	BRASS FINISHED		EACH	.50



COTTON MILL HOSE, RUBBER-LINED.
GUARANTEED 300 POUNDS PRESSURE.

SIZE INCHES	11	11	2	21
PRICE, WITHOUT COUPLINGS	. 45	.50	. 60	.70

No doubt is now expressed of the superiority of Cotton Rubber-Lined Hose over all other kinds for factory and mill fire protection, and a trial of our Mill Hose will convince purchasers that we are able to make the best Seamless Woven, Cotton, Rubber-Lined Mill Hose in the market.

This hose is light, strong and pliable, reels closely, and will not sweat or leak like linen hose. We put such a high grade of rubber in these goods that they will last for years, even if laid aside and not used.

#### FIRE HOSE .- STANDARD SIZE 21/2-INCH.

COTTON, DOUBLE JACKET RUBBER-LINED, GUARANTEED PRESSURE 500 POUNDS PER FOOT	1.00
COTTON, SINGLE JACKET RUBBER-LINED, GUARANTEED PRESSURE 350 POUNDS	.75,
RUBBER, FOUR-PLY, FIVE-PLY CAPPED ENDS, GUARANTEED PRESSURE 400 POUNDS	1.00

#### STANDARD LINEN HOSE.

SIZE	1	11	1 ½	2	2‡	$2\frac{1}{2}$
UNLINED (NOT GUARANTEED)	.14	.16	.18	. 23	.25	. 26



#### J-3. COWEN COTTON JACKET STEAM HOSE.

# COWEN COTTON JACKET STEAM HOSE,-J-3. RUBBER-LINED.

SIZE INCHES	1/2	3	1	11	11	134	2	21/2	3
PER FOOT	.63	.83	1.03	1.30	1.56	1.81	2.07	2.60	3.50

We guarantee that each length will stand a continuous pressure of 100 pounds six weeks; 50 pounds three months; 25 pounds six months.

It takes the place of a 7-ply marlin wound, extra heavy steam hose, and costs 20 per cent. less.

It depends for its strength to resist a bursting pressure upon cotton jackets, which are woven with heavy filling threads, running spirally the whole length of the hose. Thus it gets as great strength as marlin wound rubber hose at less cost.



J-10. RUBBER SUCTION HOSE, ON FLAT GALVANIZED !RON WIRE.



J-11, RUBBER SUCTION HOSE. SMOOTH BORE.

## RUBBER SUCTION HOSE.

SIZE INCHES	1 1	2	2후	3	3 1	4	4 ½	5	6	7	8	9	10	12
J-10. PER FOOT J-11, PER FOOT	1.65												20.00 22 50	25.00 27.50

J-11.—SMOOTH BORE SUCTION HOSE. This hose has a rubber lining, so that the wire is protected against the action of the water, and it gives the hose a perfect water-way, so that greater effectiveness can be obtained. It is especially desirable for fire engines, as they can get a better suction. It is also desirable for marine work, because the rubber prevents the wire from rusting. It is very flexible and strong, and is made of the very best materials throughout.

#### AGRICULTURAL SMOOTH BORE SUCTION HOSE.

SIZE INCHES	1‡	1½	13	2	2‡	2 1/2
PER FOOT	.93	1.13	1.31	1.50	.1.69	1.88 -

This is a suction hose made especially for agricultural purposes. It is very light and strong, and at the same time very reasonable in price. It is made in 10, 15, 25 and 50 foot lengths, and in sizes from 1-inch to 2-inch inclusive.

#### FOUR-PLY HARD RUBBER SUCTION HOSE.

SIZE	INCHES	2	1
PER FOOT		. 65	.75

This Section Hose is less expensive than that made on wire, and will answer for many purposes.

#### STEAM AND BREWERS' HOSE.

SIZE	1/2	3	1	11	Ι÷	2	2½
3-PLY PER FOOT 4-PLY PER FOOT 5-PLY PER FOOT 6-PLY PER FOOT	.43	.51	.67	.85	1.02	1.34	1.66
	.51	.67	.83	1.04	1.25	1.66	2.08
	.63	.83	1.03	1.30	1.56	2.07	2.60
	.76	1.00	1.24	1.56	1.87	2.49	3.12

Marlin Wound Steam Hose, 10 per cent. advance on List net.

We make Steam and Brewers' Hose in two grades-Extra, and Standard.



J-16. RUBBER HOSE.



J-20. COTTON HOSE.

#### RUBBER HOSE.

SIZE INCHES	÷	3	1	14	11/2	2	2}	2 <del>1</del>	3	4
2-PLY PER FOOT 3-PLY PER FOOT 4-PLY PER FOOT	.20 .25 .30	. 25 . 30, . 37	.33 .40 .50	.42 .50 .62	.50 .60 .75	.66 .80 1.00	.75 .90 1.12	.83 1.00 1.25	.99 1.20 1.50	1.32 $1.60$ $2.00$

Five and Six-Ply Hose made to order at an advance of 25 and 50 per cent. on Four-Ply prices.

We make the following brands of Rubber Hose, Three-Ply, subject to guarantee as below, for one season:

Double Extra guaranteed 100 pounds pressure.
Extra gnaranteed .75 pounds pressure.
Extra Standard gnaranteed 50 pounds pressure.
Standard gnaranteed 35 pounds pressure.
Ompetition, 4-ineh, 3-ply only gnaranteed not gnaranteed.

Should any Hose be returned elaimed defective, we will test it on pumps erected for this purpose, and if it will not stand pressure as guaranteed, will credit; if, however, it stands the pressure named, no credit will be given.

# "SPIRAL" GARDEN HOSE. (BLACK LINE) SEAMLESS WOVEN COTTON, RUBBER-LINED-GUARANTEED 300 POUNDS PRESSURE.

SIZE	ts Coupled.	S <sub>4</sub> Coupled.	Uncoupled.
PER FOOT	.25	.30	. 45

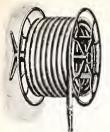
Cotton Woven Rubber-Lined Hose we carry in three grades: "Spiral," Paramount, and White Cotton-all of which we guarantee.

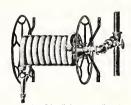


RUBBER TUBING.

SIZE, INSIDE DIAMETER	18	3 16	.1	-5 1 6	à	1/2	5300	3	1
PLAIN OR CORRUGATED PER FOOT CLOTH INSERTION, 3-PLY PER FOOT	.08	.12	.16	.18	.20	.25 .28	.30	.35	.45 .50

Cloth Insertion Tubing can be furnished with white or red cover.







J-30. PLAIN WALL HOSE REEL.

J-31. STATIONARY HOSE REEL.

J-32. SWINGING STAND-PIPE REEL.

#### PLAIN WALL HOSE REELS .- J-30.

	10.00
CAPACITY, ABOUT 150 FEET 212-INCH LINEN HOSE	CAPACITY, ABOUT 150 FEET 212-INCH LINEN HOSE

# STATIONARY HOSE REELS.-J-31. WITH ROTARY WATER JOINT.

r				
l	SIZE INLET OR ROTARY JOINT INCHES	1 ½	2	2½
	EACH	20.00	25.00	30.00

This Reel is designed for use in public buildings, warehouses and factories. It is permanently fastened to the wall, out of the way, and supported by suitable brackets.

Our Rotary Joint is straight bore, and no obstructions to water-way whatever. Always accessible, and easily attached to stand-pipe. Hose is connected to reel with a goose-neck, thereby preventing it from kinking. Free to use, whether partly or all uncoiled.

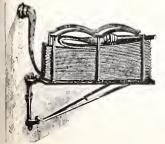
In sending orders, always send sample thread for coupling desired.

#### SWINGING STAND-PIPE REELS,-J-32.

CAPACITY, 21-INCH HOSE	50	100
EACH	10.00	11.00

These Reels are made of wrought iron thronghout, sheet metal drum and iron spokes; very strong, neat and durable.

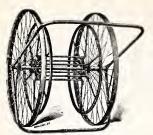
They are made for all sizes of hose, also with brackets to fasten to wall instead of pipe.



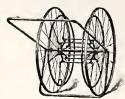
## SWINGING HOSE RACKS .- J-33.

Number		Price.
0	FOR 50 FEET, 11-2 OR 2-INCH, PLAIN LINEN	7.00
00	FOR 50 FEET, 242-INCH, PLAIN LINEN	7.00
1	FOR 100 FEET, 112 OR 2-INCH, PLAIN LINEN	8.00
2	FOR 100 FEET, 212-INCH, PLAIN LINEN	8.00
3	FOR 150 FEET, 132 OR 2-INCH, PLAIN LINEN	9.00
4	FOR 150 FEET, 21-INCH, PLAIN LINEN	9.00
3	FOR 50 FEET, 112 OR 2-INCH, LINED LINEN OR MILL.	9.00
4	FOR 50 FEET, 212-INCH, LINED LINEN OR MILL	9.00
5	FOR 100 FEET, 14 OR 2-INCH, LINED LINEN OR MILL	9.50
6	FOR 100 FEET, 212-INCH, LINED LINEN OR MILL	10.00

J-33. SWINGING HOSE RACK.



J-40. WAREHOUSE REEL. FOR MILLS, FACTORIES AND VILLAGES.



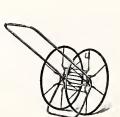
J-41. PARK REEL. FOR GREENHOUSE, PARK OR LAWN.

# TUBULAR STEEL REELS .- J-40 and J-41.

FIGURE	J-40	J-41
NUMBER         INCHES           HEIGHT OF WHEEL         INCHES           OUTSIDE WIDTH OF REEL         INCHES           CAPACITY 2½-INCH HOSE         FEET           CAPACITY ¾-INCH HOSE         FEET           WEIGHT         POUNDS           PRICE         EACH	1 2 3 42 48 52 38 40 46 150 250 400 130 180 200 35.00 45.00 55.00	1 2 28 34 



J-43. SUPERIOR HOSE REEL.



J-44. TUBULAR REEL.



J-45. "BANNER" HOSE REEL.

# GARDEN HOSE REELS .- J-43, J-44, and J-45.

F		
I	SUPERIOR, CAPACITY, 100 FEET, %-INCH HOSE, WITH DRUM AND RATCHET ATTACHMENT EACH	. 3.50
ı	TUBULAR REEL, SIZE NO. 1, CAPACITY 100 FEET, %-INCH HOSE	3.50
l	TUBULAR REEL, SIZE NO. 2, CAPACITY 150 FEET, %-INCH HOSE	4.00
I	"BANNER," CAPACITY, 100 FEET, %-INCH HOSE	2.50



### RUBBER BELTING.

SIZE _	 INCHES	1	1‡	11/2	2	$2\frac{1}{2}$	3	3 1/2	4	$4\frac{1}{2}$	5	6	7	8
2-PLY - 3-PLY - 4-PLY - 5-PLY -	PER FOOT PER FOOT PER FOOT	.07	.09	.11	.15 .17 .21 .26 .31	.18 .22 .26 .33 .39	.22 .26 .31 .39 .47	.26 .30 .37 .46 .56	.30 .34 .42 .53 .63	.33 .39 .47 .59	.36 .43 .52 .65	.43 .52 .62 .78 .93	.51 .60 .73 .91 1.10	.59 .70 .84 1.05 1.26
SIZE	 INCHES	9	10	11	12	13	14	15	16	18	20	22	24	26
3-PLY -		.67 .80 .95 1.18 1.42	.75 .90 1.07 1.33 1.60	.83 1.00 1.18 1.47 1.77	.91 1.08 1.30 1.62 1.95	1.00 1.18 1.42 1.77 2.13	1.08 1.28 1.54 1.92 2.31	1.16 $1.38$ $1.66$ $2.07$ $2.49$	1.25 1.50 1.78 2.22 2.67	1.41 1.70 2.02 2.52 3.03	1.58 1.90 2.26 2.82 3.39	1.76 2.12 2.52 3.15 3.78	1.96 2.36 2.80 3.50 4.20	2.18 2.60 3.08 3.85 4.62

Endless Belts made to order, for which there will be three extra feet charged for splice. We make three qualities of Belting, B. W. H. and Superior, both thoroughly guaranteed, and Tiger, guaranteed for light work only.

## LEATHER BELTING, PURE OAK TANNED.

SIZE INCHES	1	1 1/4	11/2	13	2	2 ‡	21/2	3	31/2	4	4 ½	5	5 ½
PER FOOT	.12	.16	. 20	.24	.28	.32	.36	.44	.52	.60	.68	.76	.84
SIZE INCHES	6	7	8	9	10	11	12	13	14	15	16	17	18
PER FOOT	.92	1.08	1.24	1.40	1.56	1.72	1.88	2.04	2.20	2.40	2.60	2.80	3.00

#### RAW HIDE CUT LACE.

SIZE	INCHES	1	₹ 1 €	28	7 8	1/2	<u>5</u> .	3	1
PER 100 FEET		1.00	1.25	1.50	1.75	2.00	2.75	3.25	4.50

Double Belts twice the price of single. Extra Heavy Belts extra prices. We do not guarantee belts rnn on quarter turn, unless they are specially made for that purpose. We make two qualities of Leather Belting, Standard and Extra.

### CANVAS STITCHED BELTING.

SIZE INCHES	2	2½	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5	6	7	8	9	10	12	14
4-PLY PER FOOT		.23	.27	.32	.36	. 41	.45	.54	.63	.72	.81	.90	1.08	::
6-PLY PER FOOT 8-PLY PER FOOT			. 36	. 42	.48	.54	.60	.72	84	.96	1.08	1.20	1.80	1.68

We make Canvas Stitched Belting in all widths to 60-inch. Send for Special Catalogue of Belting, Rubber Goods and Packing.









J-50.

RING PACKING.

PACKING.

RING PACKING.

#### RUBBER PACKING, CLOTH INSERTION .- J-50. CLOTH ON ONE OR BOTH SIDES.

THICKNESS INCHES	64	3,4	1 1 6	32	18	3	1
1-PLY		.65	. 60 . 63 . 66	.55 .58 .61	.55 .38 .61	.55 .58	.55

There is one ply of cloth to every \(\frac{1}{48}\)-inch thickness. Each cloth, whether insertion or on outside, to count as one ply. Three cents per pound additional will be charged for each extra ply of cloth.

## GARLOCK PACKINGS .- J-55, J-56, and J-57.

PER POUND	 	 	1.20

Pure Sheet Packing, or Valve Gum, per pound, \$1.40.

Pure Sheet Packing, or Valve Gum, is made 36 inches in width, and of any thickness or length desired.

For cutting rubber, use a sharp knife and keep it wet.

We carry in stock three grades, XX, XXX, and XXXX. the latter being the best quality. Self-Vulcanizing Packing, N. F. Brand, per pound, 80 cents:

Kept on hand, in sheets 3, 1, 1, 1, 3, 1, 1, 1, and 4 inches thick. Other sizes, Gaskets, Riugs, etc., furnished on short notice.



J-60. ROUND PISTON PACKING.



J-61. SQUARE PISTON PACKING.



J-62. SQUARE PISTON PACKING, RUBBER BACK.



J-75. GASKETS.

J-60 AND J-61	 	 	PER POUND	85
J-75. PURE RUBBER	 	 	PER POUNO	1.50
J-75. CLOTH INSERTION	 	 	PER POUNO	1.25

J-60 and J-61 are made in sizes 1, 2, 1, 1, 1, 1, 1, 11, and 11 inches.



J-80. PURE RUBBER VALVES.

#### PURE RUBBER VALVES-J-80.

We have in stock three grades: Hard, for hot water; Medium and Soft, for cold water. Special Valves made to order. Price per pound, \$1.50.

FOR UNIONS, FLANGE UNIONS,
AND
PLAIN FLANGE JOINTS.



FOR STEAM, AIR, GAS, OR VATER PIPE CONNECTIONS.

J. 65.

#### CORRUGATED METAL GASKETS.

SIZE INCHES	i	. 3	÷	3	1	11	13	2	21	3	3 }	4	4 1
FOR UNIONS EACH FOR FLANGE UNIONS . EACH FOR FLANGED FITTINGS EACH	0.5	.03	.02	.02	.03	.04	.05	.06 .08 .16	.06 .09 .23	.11 .12 .24	.13 .18 .25	.18 .19 .26	.27 .29
SIZE INCHES	5	6	7	8	9	10	12	14	16	18	20	5.5	24
FOR FLANGE UNIONS EACH FOR FLANGED FITTINGS . EACH	.27	.39	.44	.49 .74	.84 .92	.70 .94	.87 1.37	1.51	1.79	1.93	2.10	2.36	2.55







METAL MAN-HOLE GASKETS.

In ordering Man-Hole Gaskets, specify shape desired, and where possible send template. We carry in stock Gaskets for all standard makes of Boilers.

#### METAL HAND-HOLE GASKETS.

SIZE INCHES	2 j x 3 j	2 x 4	3½ x 4½	4 x 5	4½ x 5½	4 x 6	5 x 7
EACH	.15	. 20	. 25	. 30	.40	. 45	. 50

For Babcock & Wilcox, 6 x 8, 50 cents; Campbell & Zell, 4 x 11, 30 cents; Standard, 4 x 11, 30 cents; Gill, 4 x 11, 30 cents; Edgemoor's Oval, 20 cents; Heine, 15 cents.













J-98. BIBB WASHERS.

BOSS WASHERS, FOR COMPRESSION BIBBS, 38, 39, 48,	AND 34-INCH .	PER 100	.75
FIBER WASHERS, FOR COMPRESSION BIBBS, 59 TO 1-	INCH	PER 100	.75
RUBBER HOSE WASHERS, M-INCH		PER 100	. 75
PAPER BOILER COUPLING WASHERS		PER 100	. 75
GAUGE GLASS WASHERS		PER OOZEN	. 12

## ASBESTOS MATERIALS.

Wick Packing, put up in 1, 1 and 1-pound balls.

Steam Rope Packing, put up in 25 and 50-pound coils.

Labricated Rope Packing, put up in 25 and 50-pound coils.

Gaskets, any size or thickness, to order.

Mill Board, in sheets 40 x 40 inches, 41 to 1-inch in thickness.

Mill Board, in sheets 40 x 40 inches,  $\frac{1}{3}$  to  $\frac{1}{2}$ -inch in thickness. Sheathing or Building Felt, in rolls 36 inches wide, weighing about 100 pounds, 1, 2, 3 or 4-ply.

Cement Felting, for covering steam pipes, boilers, heaters, tanks, etc.; in barrels.

Pipe Coverings, see page 148.



J-110. HEMP AND JUTE PACKING.





Market

#### HEMP, JUTE, AND OAKUM PACKINGS.-J-110 and J-112.

ITALIAN HEMP, A	PER POUNO 20
JUTE	
TARRED JUTE	
OAKUM	BALE (50 POUNDS) 5.00

Our Oakum and Jute Packings are carefully selected, and will be found particularly adapted for use in calking Cast-Iron Pipe. We use only Spun Navy Oakum.

## COTTON WASTE, "OUR CRESCENT" BRAND .-- J-115.

NUMBE	R.		-	 			-	 -	-	-		-	-	-	-	-	-	-	-	-	-	-	1	2	3
WHITE																							.10	.09	.06

We make a specialty of Cotton Waste for use of Water Works and Electric Light Plants, and recommend the use of "Our Crescent" No. 2 White Waste. For convenience of our trade we carry 500 and 50 pound bales. For less than full bales I cent per pound will be added to price.

## MANILLA ROPE.

SIZE IN OLAMETER INCHES	1	1 g	8 8	7	$\frac{1}{2}$	16	58	1	13	7 8	1	116	11	11
WEIGHT OF 100 FEET _ LBS.	3	4	5½	7	8	11	15	17	21	25	33	36	42	46
STRENGTH OF NEW ROPE, LBS.	450	750	900	1250	1700	2300	3000	4000	5000	5800	7000	8000	9200	11000
SIZE IN CLAMETER INCHES	18	176	11/2	15	13	2	21	23	21/2	23	24	3	31/2	
WEIGHT OF 100 FEET _ LBS.	54	62	67	84	100	120	142	170	192	217	243	276	350	
STRENGTH OF NEW ROPE, LBS.	13500	15500	17000	19900	23500	29300	37000	42000	48000	54000	61000	67000	96000	

Per pound, all sizes, 20 cents. A very large stock of all sizes always on hand. Hawser Laid Manilla Rope for oil and artesian well use.

Tallow Laid Manilla Rope laid up in three and four strands. We guarantee all our Manilla Rope to be made out of pure Manilla Hemp of the best quality.

#### MISCELLANEOUS PACKINGS.

EMPIRE GUM CORE PACKING, Square, Round, or Oval,	PEERLESS, Spiral or Square, per pound . Market
on Reels, per pound Market	USUDURIAN SHEET PACKING, in Rolls, per pound . Market
EUREKA GUM CORE PACKING, Square, Round, or Oval,	VULCABESTOS ROPE PACKING, per pound Market
ou Reels, per pound Market	VULCABESTOS SHEET PACKING, per pound Market
FLAX PACKING, Square, in box, per pound . Market	CRANDALL PACKING, per pound Market
TUPPER'S FLAX PACKING, in box, per pound Market	RAINBOW PACKING, per pound Market
CANDLE WICKING, per pound Market	KNOWLTON IMPORTED RING PACKING, per pound . Market
PLUMBAGO SHEET PACKING, per pound Market	ECLIPSE PACKING, per pound Market
SELDEN'S GUM CORE PACKING, in Coils, per pound, Market	GOODSELL'S RUBBER BACK FLAX PACKING, per pound, Market
SELDEN'S CANVAS CORE PACKING, in Coils, per pound, Market	GOODSELL'S DOLLAR PACKING, per pound Market











Number.	Stroke, Inches.	Suction Pipe Inches.	*Lift.	*Lift and Force	J-150. Each.	J-152 Each.	J-154. Each.	J-156. Each.	J-158. Each.
1 2	6	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		2½-in. cyl. 60 ft. 3 -in. cyl. 45 ft.			10.00 11.00	11.00 11.00	12.50 13.50
3 4 5	6 6 6	1 t 1 t 1 t 1 t 1 t 1 t 1 t 1 t 1 t 1 t	2½-in, cyl. 40 ft. 3 -in, cyl. 40 ft. 3½-in, cyl. 40 ft.		5.50 6.00 6.50	6.25 6.75 7.25			













# PUMPS WITH CONNECTING PIPE AND CYLINDER.

Number.	Diam. Cytinder. Inches	Capacity Per Stroke.	*Lift J-170	*Lift J-172	*Lift and Force. J-174, J-176, J-178.	J-170. Each.	J-172 Each.	J-174 Each.	J-176. Each.	J-178. Each.
2 3 4 5	2 3 2 1 2 1	.13 gal. .15 gal. .18 gal. .22 gal.	40 feet 40 feet 30 feet 30 feet	50 feet 50 feet 40 feet 40 feet	60 feet 60 feet 60 feet 45 feet	8.00 8.25 8.50 8.75	8.75 9.00 9.25 9.50	12.00 12.25 12.50 13.00	13.50 13.75 14.00 14.50	14.50 14.75 15.00 15.50

Suction—1∔inch pipc.
\*Depth of Wells to which Pumps may be adapted by lowering Cylinders to within 15 or 20 feet of water.







J-202. FORCE PUMP.



J-204. FORCE PUMP.



J-206. FORCE PUMP.

## PUMP STANDARDS.

Stroke.	Suction	*Lift.	J	-200. Eac	h.	J-202.	Each	J-204	Each.	J 206. Ea.
Inches.	Inches	· Ent.	No. 3.	No. 4.	No. 5.	No. 1.	No. 2.	No. 1.	No. 2.	
6	1 }	23-inch cylinder, 100 ft.	7.00	7.50	8.00	10.00	11.00	12 50	13.50	13.00
10	2	3 -inch cylinder, 60 ft.		9.00	9.50	11.50	12.50	14.00	15.00	14.50



J-212. LIFT PUMP.



J-214. FORCE PUMP

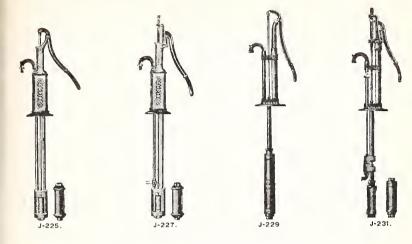


J-216. FORCE PUMP.

## PUMPS WITH CONNECTING PIPE AND CYLINDER.

Number.	Diam Cyl. Inches.	Stroke.	Capacity Per Stroke	Suction. Inches.	*Lift. J-212.	J-214. J-216. *Lift.	J-212. Each.	J-214. Each.	J-216. Each.
2	21/2	6 in.	.13 gal.	11	40 ft,	60 ft.	9.00	13.00	15.50
3	23	6 44	.15 "	1‡	40 "	60 "	9.25	13.25	15.75
4	3	6	:18 "	1 }	30 "	60 "	9.50	13.50	16.00
5	31	6 11	.22 "	1‡	30 "	45 ''	9.75	14.00	16.50

<sup>\*</sup>Depth of wells to which Pumps may be adapted by lowering Cylinders to within 15 or 20 feet of water.



#### DOUBLE-ACTING WELL FORCE PUMPS.

Ĩ		Diameter	Discharge	* Lift	J-225-	-Ench.	J-227-	-Each.	J-229-	-Each.	J-231-	-Each.
	No.	Lower Cyl Inches.				Brass Body Cylinder.	Brass Lined Cylinder	Brass Body Cylinder,	Brass Lined Cylinder.	Brass Body Cylinder	Brass Lined Cylinder,	Brass Body Cylinder.
	2 4	3 5 f	3	100 75	14.00 14.50	16.00 16.50	17 00 17 50	19.00 19,50	14.50 15.00	15.50 16.00	19.50 20.00	20.50 21.00

Suction Pipe, size 3-inch. Lower Discharge on J-227, 3-inch pipe, on J-231, 1-inch pipe.

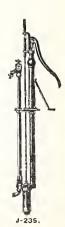
## ANTI-FREEZING WELL FORCE PUMP HEADS .- J-233.

Stroke.	Suction.	Lower Discharge.	Upper Discharge.	Well Rod.	Each.
6-inch 10-inch Adjustable, 7	14-in, Pipe 2 -in, Pipe 2 -in, Pipe	1-in, Pipe 1-in, Pipe 1-in, Pipe			17.00 18.50

## ANTI-FREEZING WELL FORCE PUMP HEADS.-J-235.

Stroke.	Brass Body Cylinder.	Suction.	Lower Discharge.	Upper Discharge.	Lift and Force	Each.
6-inch	24x104 in.	11-in. Pipe	1-in. Pupe	3-in, Hose	125 ft,	25,00
10-inch			1-in, Pipe		75 ft.	29.00
Adjustable, }	2½x14 in.	14-in. Pipe	1-in. Pipe	3-in. Hose	75 ft.	30.00

<sup>\*</sup>Total lift and force from supply to point of delivery; pump not more than 25 feet above water.









-249.

#### HOUSE FORCE PUMPS, WITH REVOLVING BRAKE AND CHECK VALVE.-J-245.

No.	Diameter Cylinder, Inches.	Stroke, Inches.	Capacity per Stroke.	Suction, Inches.	Discharge, Inches.	*Lift and Force.	Iron, Each.	Brass Cylinder, Each.	Brass, Each.
0	2	6	.08 gal.	$ \begin{array}{c} 1 \\ 1\frac{1}{4} \\ 1\frac{1}{2} \\ 2 \end{array} $	1	60 ft.	8.00	13.50	20,00
2	2½	6	.13 "		14	60 ''	9.50	14.00	21,00
4	3	6	.18 "		14	60 ''	11.00	15.00	32,00
6	3½	7 ½	.31 "		1½	40 ''	17.00	24.00	38,00
8	4.	7 ½	.41 "		1½	40 ''	18.00	30.00	47,00

#### HOUSE FORCE PUMPS .- J-247 and J-249.

1	No.	Diameter Cylinder,	Stroke,	Capacity	Suction,	Disch	arges.	Iron, Each.	Brass Cylinder,	Brass, Each,
-	110.	Inches.	Inches.	per Stroke.	Inches.	Pipe.	Hose.	1100, Lacii.	Each.	Diass, Each,
	0	2	6	.08 gal.	1	11	1	11.00	16.50	22.00
-	2	21/2	6	.13 "	11	11	1	12.50	18.00	23.50
- 1	4	3	6	.18 ''	11	1.	1	14.50	19.50	35,00
-1	6	31	7 ½	.31 ''	1½	11/2	1	21.50	29.50	43.50
- 1	8	.4	7-2	.41 ''	2	11	1	22.50	35.50	52.50

## HOUSE FORCE PUMPS, ON PLANK .- J-251.

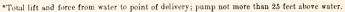


No.	Diameter Cylinder, Inches.	Capacity per Stroke.	Suction, Inches	Dis- charge, Inches	*Lift and Force.	Iron, Each.	Brass Cylinder, Each.	Brass, Each.
0 2 3 4 5 6	2 2½ 2½ 3 3 3¼ 3½	.09 gal. .15 '' .18 '' .21 '' .25 ''	1 114 114 114 115 12	1 1 1 1 1 1 1 1	80 ft. 60 " 60 " 40 " 40 "	14.00 15.00 15.75 16.50 20.00 22.00	19.00 20.00 21.00 22.00 25.00 32.00	26.00 30.00 33.00 35.00 40.00 45.00

#### HOUSE FORCE PUMPS, ON PLANK .- J-253.

No.	Diameter Cylinder.		Suction,	Discl	narge	Lift and	Iron,	Brass Cylinder,	Brass.
140.	Inches.	Stroke.	Inches.	Pipe.	Hose.	Force.	Each,	Each.	Each.
.0	2	, 09 gal.	1	1 in.	.I in:	100 ft.	18.00	27.00	35.00
2	24	.15 "	11	11 "	I "	75 "	19.00	28.00	37.00
3	29	.18 "	11	14 "	1 "	75 "	20.00	29.00	40.00
4	3	.21 **	11	14 "	1 "	75 "	22.00	30.00	42.00
5	31	.25 **	11	11 "	I	50 "	26,00	33.00	49.00
6	3 1	.29 "	14	11 "	1 "	50 "	28.50	37.50	56.00

J-251





1 252



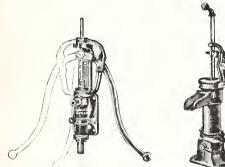
#### PITCHER SPOUT PUMPS.-J-263.

NUMBER	1		=	4
DIAMETER CYLINDER INCHES	51	3	34	4
CAPACITY PER STROKE GALLONS	.09	.12	.17	. 2.2
SUCTION INCHES	1	1 }	11	14
LIFT FEET	25	25	25	25
IRON EACH	4.25	4.75	5.25	5.75
BRASS LINED EACH	6.50	7.25	8.00	9.00
PORCELAIN LINED EACH	6.50	7.25	8 00	9.00



#### CISTERN SUCTION PUMPS .- J-265.

NUMBER	0	1	2	-3	4	5	6	H
DIAMETER CYLINDER INCHES CAPACITY PER STROKE GALLONS SUCTION INCHES LIFT FEET IRON EACH BRASS CYLINDER EACH BRASS EACH	2 .07 1 25 3.50 5.50 7.75	2¼ .10 1 25 4.00 6.00 8.75	$\begin{array}{c} 2\frac{1}{2} \\ ,13 \\ 1\frac{1}{4} \\ 25 \\ 4.50 \\ 7.00 \\ 10.50 \end{array}$	$ \begin{array}{c} 2\frac{3}{4} \\ .15 \\ 1\frac{1}{4} \\ 25 \\ 5.00 \\ 8.00 \\ 14.00 \end{array} $	3 .18 1½ 25 5.50 10.00 17.00	3 t .22 1 t 25 6.50 13.00 21.00	3½ .25 1½ 25 8.00 18.00 27.00	4 .33 2 25 10.00 25.00 35.00



J-269.





J-272. AERATING PUM

#### IMPROVED BRASS HOUSE FORCE PUMP.-J-269.

														_	 -			
DIAMETER CYLINDER .																	INCHES	113
CAPACITY PER STROKE																(	GALLONS	01
SUCTION, LEAD PIPE.																	INCHES	1
DISCHARGE, GAS PIPE .									. ,								INCHES	1
LIFT AND FORCE									 				 				. FEET	50
BRASS									 								. EACH	10.00

# AERATING CISTERN PUMPS .- J-272,

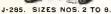
3-INCH CYLINDER	 	EACH	10.00

Write for descriptive circular.

#### GREENHOUSE PUMPS .- J-275.

ſ		
1	COMPLETE, WITH 24-FT. 4-IN. SUCTION HOSE AND 3-FT. 4-IN. DISCHARGE HOSE AND SPRAY NOZZLE . EACH	9.00







J-287. SIZES NOS. 9 TO 11.



1-289. DOUBLE RAM

## IMPROVED HYDRAULIC RAMS. -J-285 and J-287.

## FOR SUPPLYING DWELLINGS, FACTORIES, RAILROAD STATIONS, STOCK YARDS, ETC., WITH RUNNING WATER.

NUMBER	2	3	4	5	6	7	8	9	10	11
SUPPLY PER MINUTE TO GALS.	1 to 2	2 to 4	3 to 7	6 to 10	11 to 25	20 to 40	25 to 75	11 to 25	20 to 40	25 to 75
LENGTH OF DRIVE PIPE FEET	50 to 75	50 to 75	50 to 100	50 to 150	50 to 200					
SIZE OF DRIVE PIPE INCHES	3	1	11	2	21/2	3	4	21/2	3	4
SIZE OF OISCHARGE PIPE, INCHES	1/2	1	3	1	14	11	2	14	11/2	2
J-285, WITH LEATHER VALVE, EACH	9.00	11.00	14.00	22.00	40.00	75.00	125.00			
J-287, WITH BRASS SPRING EACH								50.00	85.00	135.00

#### IMPROVED HYDRAULIC DOUBLE RAMS .- J-289.

NUMBER	6	7	8
SUPPLY PER MINUTE TO OPERATE RAM         GALLONS           LENGTH OF DRIVE PIPE         FEEI           SIZE OF DRIVE PIPE         INCHES           SIZE OF DISCHARGE PIPE         INCHES           J-2B9. WITH BRASS SPRING VALVE         EACH	11 to 25	20 to 40	25 to 75
	50 to 200	50 to 200	50 to 200
	21	3	4
	11	2	21
	100.00	170.00	270.00

The Hydraulic Ram, as we build it to-day, represents the most efficient and automatic labor-saving device known for raising water any distance where a sufficient supply and head are attainable, and the slight expense for first outlay and maintenance considered render them most desirable for supplying running water in any quantity to residences, villages, etc. With an experience of 35 years in their manufacture, and a practical knowledge of the requirements necessary for their successful operation, we are able to offer the most perfect and efficient Ram in the market. Our castings are all heavy in pattern and of proportionate strength. The air chambers are larger than those of any other Ram, thus relieving it of all undue strain and aiding its working, while the valve stem and case (made of best brouze metal) are of a new and improved design calculated to develop the greatest possible efficiency.

Head of Fall of Drive Pipe.—Rams will work, and successfully, where the spring or brook is only 3 feet higher than the Ram; yet, as the height or head increases, the more powerfully the Ram operates, and its ability to force water to greater elevation and distance correspondingly strengthens. The best wearing results will be secured where the head of fall does not exceed 10 feet. The head on the discharge pipe may be from five to ten times the head on the drive pipe.

Thus, as shown in our Tablo of Tests, we have a varying head of 10 to 25 feet, proportioned to height water is to be raised and quantity required. As a specific example, we might say a fall of 10 feet from the brook or spring to the Ram is sufficient to raise water to ary point, say, 150 feet above the machine, while the same amount of fall would also raise water to a point considerably higher, though the quantity of water discharged will be proportionately diminished as the height and distance increase.

Rule for determining the amount of water delivered from a given supply, viz.: Multiply the number of gallons supplied to the Ram per minute by 3, and this product by the number of feet in head, or fall of drive pipe, and divide by four times the number of feet the water is to be raised. The result is the number of gallons raised per minute.

Example.—With a supply of 10 gallons per minute delivered to Ram, under a head of fall of 10 feet, how much water can be raised to an elevation of 100 feet: 10.5.10 = .75 gallon per minute.

SELECTION OF RAMS.—Size of Ram to be used can be easily found from tables given in connection with each Ram, after the amount of water that can be depended on for the supply is ascertained, or, where this is in excess of needs, from the delivery required.





ROTARY FORCE PUMPS, HAND AND POWER:

V.	Minute, 100	Suction,	Discharge,	*Lift and	J-300.	Each	J-302.	Each		
No.	Revolutions.	Inches.	Inches.	Force.	Iron.	Bronze.	Irou.	Bronze.		
1	13 gals,	1}	1	60 ft,	19.00	41.00	27.00	49.00		
2	14 "	11	1	60 14	22.00	46.00	32.00	56.00		
3	17 **	1 ½	1}	60. "	26.00	51.00	38.00	63.00		
4	27 17	2	14	60 "			48.00	78.00		
5	36 "	2	2	60 "			54.00	90.00		
G	45 "	21	21/2	60 "			80.00	135.00		

\*Total lift and force from supply to point of delivery; pump not more than 20 feet above water. Bronze Pumps have bronze cases, cams and spouts,



DOUBLE-ACTING FORCE PUMPS.-J-308.

No.	Diameter Cylinder, Inches.	Capacity per Rev.	Suction, Inches	Discharge, Inches.	*Lift and Force.	Iron, Each.	Brass Lined, Each.
2	21	.21 gals.	1 †	1	75 ft.	16.00	17.50
. 4	3	.31 ''	11	1	75 "	18.00	20.00
6	$3\frac{1}{2}$	.42 /4	1 1	11	50 "	20.00	22.50
8	4	.54 ''	11	14	50 **	24.00	27.00

\*Total lift and force from snpply to point of delivery; pump not more than 25 feet above water.



"CHALLENGE" DOUBLE-ACTING FORCE PUMPS,-J-310, WITH BRASS LINED CYLINDER AND METAL VALVES.

Cylinder, Inches,	Capacity per Rev.	Suction, Inches.	Discharge, Inches.	*Lift and Force.	Brass Lined, Each,	Brass, Each.
5 į	.19 gals,	11	1	150 ft.	27.00	75.00
3	.28 **	11	1	150 "	27.00	75.00
4	. 4.9	14	11			90,00 110,00
		fuches, per Rev.	Inches.   per Rev.   Inches.	faches.         per Rev.         Inches.         Inches.           2½         .19 gals.         1½         1           3         .28 °°         1½         1           4         .49 °°         1½         1½	faches,         per Rev.         menes.         Inches.         Force.           2½         .19 gals.         1½         1         150 ft.           3         .28 "         1½         1         150 "           4         .49 "         1½         1½         1½         100 "	Inches.         per fev.         Inches.         Inches.         Force.         Each.           2½         .19 gals.         1½         1         150 ft.         27.00           3         .28 °°         1½         1         150 °°         27.00           4         .49 °°         1½         1½         100 °°         28.00

\*Total lift and force from supply to point of delivery; pump not more than 25 feet above water.



#### HYDRAULIC PRESSURE OR TEST PUMPS .- J-320.

No.	Diam. Ram. Inches.	Stroke, Inches,	Suction and Discharge.	Working Pressure,	Each.
0 1 2 3	1 1 1 1 1	5 5 5 5	1-inch Pipe 1-inch Pipe 1-inch Pipe 1-inch Pipe	700 pounds 550 pounds 400 pounds 200 pounds	20.00 21.50 22.50 27.50

Can furnish with strong wood barrow, with east-iron tank underneath, at \$10.00 extra list.

#### GAS DRIP PUMPS .- J-325.

No.	Diam. Cyl. Inches.	Stroke. Inches.	Capacity per Stroke,	Suction. Inches.	Each.
0 2	2 2 <u>1</u>	9	.12 gal. .19 gal.	94 24 24	12.00 16.00

J-325 is our Plumbers' and Gas Companies' Drip Pump for extracting the water from gas drips. These Pumps have brass cylinders, brass valves and plunger rod, glands, etc. Suction is regularly fitted for wrought-iron pipe, unless otherwise ordered.







1-335

#### \*SHALLOW WELL PUMP CYLINDERS.-J-330 and J-335.

SIZE INCHES	21×10	2½x10	23x10	3x10	3½x10	4×10	2x12	24x12	23x12	2∦x12	3x12
IRON EACH IRON BODY, BRASS LINED . EACH BRASS BODY AND PLUNGER . EACH ALL BRASS EACH	7.50	7.75	8.25	8.75		11.00	7.50 8.00	8.00 8.25	8.50	9.00	7.00 9.50 9.50 14.00
SIZE INCHES	34x12	4x12	2x14	2‡x14	2½x14	24x14	3x14	3½x14	4x14	4½x14	5×14
IRON EACH IRON BODY, BRASS LINED . EACH BRASS BODY AND PLUNGER . EACH ALL BRASS EACH	10.50 11.25	12.50 15.00	8.25 9.75	$\frac{8.75}{10.25}$	$9.25 \\ 10.50$	$\frac{9.75}{11.25}$	$\frac{10.25}{11.75}$	11.25 14.75	14.00 19.00	18.00 28.00	20.00 24.50 38.00 50.00

#### \* DEEP WELL PUMP CYLINDERS,-J-330 and J-335.

SIZE INCHES	2x16	24x16	24x16	23x16	3x16	3½x16	4x16	4½x16	5x16	5x18	6x1
IRON EACH IRON BODY, BRASS LINED . EACH BRASS BODY AND PLUNGER . EACH ALL BRASS EACH	9.00	9.50 11.25	10.00 11.75	$10.50 \\ 12.25$	$\frac{11.00}{12.75}$	12.00 16.00	15.75 20.50	20.00 30.50	27.50 42.00		30.0 35.0 62.0 75.0
SIZE INCHES	8x16	21x20	51/50	54×50	3x20	3½x20	4x20	4½x20	5×20	6x20	8 x 2
IRON EACH BRASS BODY AND PLUNGER . EACH ALL BRASS EACH	124.00	12.75	13.50	14.25	14.75	18.00	24.00	39.50	52.00	72.00	144.0

<sup>\*</sup> Other sizes carried in stock. Prices quoted upon application.







J-350. FORCE PUMP.



J-351. WITH STIRRUP.

#### BASIN AND FORCE PUMPS.

FIGURE	J-345	J-350	J-351
EACH	11.00	12.00	15.00



J-355. WITH MERCURY GAUGE.



J-356, AIR TEST PUMP.



J-357. WITH AIR GAUGE.

#### GAS PROVING PUMPS.

J-355.	COMPLETE	25.00
J-355.	MERCURY GAUGE, WITH COCK AND ETHER CUP	10.00
J-356.	PUMP, WITH HOSE	15.00
J-357.	COMPLETE EACH MERCURY GAUGE, WITH COCK AND ETHER CUP PUMP, WITH HOSE EACH COMPLETE EACH	30.00



J-365. GAS MAIN CLEARING PUMP.

#### GAS MAIN CLEARING PUMPS .- J-365.

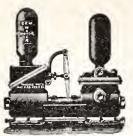
COMPLETE	 	 EACH 30.00

This Pump is made to meet every requirement of the trade, both as to convenience and efficiency, and is by all means the best method of clearing Waste and Service Pipes.

The Cylinder is of Copper, with Pump and Valves of Brass, all substantially constructed and tested at 100 pounds pressure.

#### EXTRA PARTS FOR GAS PROVING PUMPS.

	-	-	 =	_	_	_	-	_	 	 	_	_	-	=	-	-	 -	-	_		
ETHER CUP ONLY																				EACH	.50
MERCURY CUP ONLY																				EACH	4.00
GLASS TUBE ONLY .																				EACH	1.00



J-375. GEM WATER MOTOR.



J-380. DUPLEX GEM MOTOR

#### GEM AND DUPLEX WATER MOTORS.

FIGURE	J-375	J-380
NUMBER	1 2 3	1 2 3
PRICE         - EACH           SUPPLY PIPE         INCRES           EXHAUST PIPE         INCRES           BUCTION AND DISCHARGE PIPE         INCRES           HEIGHT OVER ALL         INCRES           LENGTH OVER ALL         INCRES	$ \begin{array}{c cccc} 40.00 & 45.00 & 50.00 \\ \hline \frac{8}{8} & \frac{5}{2} & \frac{5}{2} \\ \frac{1}{4} & \frac{1}{2} & \frac{1}{2} \\ 15\frac{1}{2} & 16\frac{1}{2} & 17\frac{1}{2} \\ 15\frac{1}{2} & 15\frac{1}{2} & 15\frac{1}{2} \end{array} $	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$

#### TABLE OF HEIGHTS DIFFERENT PRESSURES WILL RAISE WATER FROM CISTERNS.

NUMBER	1	1	1	2	2	2	2	2	3	3	3	3
POUNDS PRESSURE	25	35	50	15	20	25	35	40	10	12	15	20
	30	40	70	20	40	50	80	100	30	40	50	70
	40	60	80	40	60	70	100	125	40	50	70	100

#### CLOSE ELBOW UNIONS, FOR CONNECTING MOTORS.

- 1			
	SIZE	1/2	4
	ROUGH BRASS	1.20	1.50

With these Unions all the pipes can be connected behind the Motor, leaving the front clear and without any projecting pipes.

Set for Duplex Gem Water Motor (each size), one 4-inch, three 1-inch.

#### THE EUREKA WATER LIFT.-J-384.

NUMBER	1	2	5	3	4
SIZE INLET INCHES	â	ą	}	3	4
LENGTH INCHES	20	20	23	24	24
HEIGHT INCHES	13	13	17	18	18
PRICE	50.00	50.00	70.00	90,00	90.0

Descriptive Circular sent upon application.



J-384. EUREKA WATER LIFT.



J-400.

#### BRASS JACKET POINTS, MADE OF GALVANIZED IRON PIPE.

Trade Number.	Diameter. Inches.	Length of Point. Inches.	Length of Jacket, Inches.	Number of Holes.	60 Gauze. Per Dozen.	70 Gauze. Per Dozen.	N) Gauze. Per Dozen.	90 Gause Per Dozen.	100 Gauze. Per Dozen.
74	1	24	18	72	33.00	40.00	46.00	52.00	62.00
76	1	30	2.1	96	42.00	49.00	56.00	64.00	78.00
78	1	36	30	120	51.00	59.00	66.00	76.00	94.00
80	1	42	36	144	60.00	68.00	76.00	88.00	120.00
82	1	48	42	168	69.00	78.00	86.00	100.00	136.00
84	1	54	48	197	78.00	87.00	96.00	112.00	152.00
86	î+	20	14	80	30.00	36.00	42.00	50.00	64.00 -
90	îi	24	18	100	36.00	44.00	52.00	60.00	80.00
94	i i	30	24	130	46.00	55.00	64.00	75.00	100.00
98	îi	36	30	165	56.00	66.00	76.00	90.00	120.00
100	ii	42	36	200	66.00	77.00	88.00	105.00	140.00
102	l ii l	48	42	270	76.00	88.00	100.00	120,00	160.00
106	11	54	48	260	86.00	99.00	112.00	135.00	180.00
110	11	60	54	290	96.00	110.00	124.00	150.00	200.00
112	î	66	60	320	106.00	121.00	136.00	165.00	220.00
114	1 ii	72	66	350	116.00	132.00	148.00	180.00	240.00
136	11/2	24	18	120	48.00	57.00	65.00	78.00	94.00
140	1 1 1 1	30	24	162	60.00	70.00	80.00	96.00	118.00
144	1 1 1	36	30	198	72.00	84.00	95.00	114.00	142.00
146	1 1 1 1	42	36	240	84.00	97.00	110.00	132.00	166.00
148	1 1 1	48	42	276	96.00	111.00	125.00	150.00	188.00
150	11/2	54	48	312	108.00	124.00	140.00	168.00	204.00
152	11/2	60	54	348	120.00	138.00	155.00	186.00	228.00
154	11	66	60	384	132.00	151.00	170.00	204.00	252.00
156		72	66	420	144.00	165.00	185.00	222.00	276.00
	11/2						94.00	110.00	
160	2	24 30	18	144	75.00	85.00 101.00	112.00	132.00	130.00
164	2		24	208	90.00	118.00	130.00	154.00	160.00
168 170	2	36 42	30 36	264 288	105.00 120.00	134.00	148.00	176.00	190.00 220.00
	2					151.00	166.00	198.00	
172	2	48	42	336	135.00				250.00
174	2 2	54	48	384	150.00	167.00	184.00	220.00	280.00
176		60	54	432	165.00	184.00	202.00	242.00	310.00
178	2	66	60	480	180.00	200.00	238.00	264.00	340.00
180	2	72	66	528	195.00	217.00		286.00	370.00
184	21	36	30	300	180.00	205.00	230.00 300.00	260.00	300.00
188	21	48	42	360	230.00	265.00		340.00	400.00
192	21	60	54	420	280.00	325.00	370.00	420.00	500.00
196	21	72	66	480	330.00	385.00	440.00	500.00	600.00
200	3	36	30	300	240.00	275.00	310.00	340.00	410.00
204	3	48	42	420	300.00	345.00	390.00	430.00	520.00
208	3	60	54	540	360.00	415.00	470.00	520.00	630.00
213	3	72	66	660	420.00	485.00	550.00	610.00	740.00
216	4	48	36	360	480.00	520.00	560.00	600.00	700.00
220	4	72	. 60	600	630.00	695.00	760.00	840.00	1000.00
224	4	96	84	840	780.00	870.00	960.00	1080.00	1300.00
228	4	120	108	1080	930.00	1045.00	1160.00	1320.00	1600.00

#### SUCTION PIPE STRAINERS WITH SET SCREW .-- J-405.



SIZE OF PIPE CONNECTION INCHES	1	11	· 1½	2
GALVANIZED, WITH BRASS GAUZE EACH GALVANIZED, WITHOUT BRASS GAUZE EACH	.28	.32	.36	.50
PLAIN, WITHOUT BRASS GAUZE EACH	.18	.20	.24	.36

Suction Pipe Strainers, threaded, male or female, same list as above. These Strainers are covered with a good quality of brass wire cloth, and are non-corrosive.



J-410.

#### OPEN CENTER DRIVE WELL POINTS .- J-410.

Trade Number.	Diameter. Inches.	Length of Point. inches.	Length of Jacket. Inches.	60 Gauze. Per Dozen.	70 Gauze. Per Dozen.	8) Gauze. Per Dozen.	90 Gauze. Per Dozen.	100 Gauze. Per Dozen.
6	11.	24	18	36.00	44.00	52.00	60.00	80.00
7	11	30	24	46.00	55.00	64.00	75.00	100.00
8	11	36	30	56.00	66.00	76.00	90.00	120.00
9	11	42	36	66.00	77.00	88.00	105.00	140.00
12	14	24	18	48.00	57.00	65.00	78.00	94.00
13	1 1	30	24	60.00	70.00	80.00	96.00	118.00
14	11	36	30	72.00	84.00	95.00	114.00	142.00
15	14	42	36	84.00	97.00	110.00	132.00	166.00
18	2	24	18	75.00	85.00	94.00	110.00	130.00
19	2	30	24	90.00	101.00	112.00	132.00	160.00
20	2	36	30	105.00	118.00	130.00	154.00	190.00

#### LARGE SIZED WELL POINTS FOR RAILROADS.

SIZE OF PIPE	INCHES	5	6	8
BLACK PIPE, WITH 60 GAUZE		5.00 5.00	5.80 5.80	8.50 8.50

#### WASHER POINTS.

Trade Number.	Diameter. Inches.	Length of Pipe. Inches.	Number of Holes.	60 Gauzo. Per Dozen.	70 Gauze. Per Dozen.	80 Gauze. Per Dozen.	90 Gauze. Per Dozen.	100 Gauze Per Dozen
300	11	20	50	30.00	36.00	42.00	50.00	64.00
301	11	24	60	36.00	44.00	52.00	60.00	80.00
302	11	30	80	46.00	55.00	64.00	75.00	100.00
303	11	36	100	56.00	66.00	76.00	90.00	120:00
304	11	42	120	66.00	77.00	88.00	105.00	140.00
305	11	48	140	76.00	88.00	100.00	120.00	160.00
320	14	24	80	48.00	57.00	65.00	78.00	94.00
321	1 1	30	110	60.00	70.00	80.00	96.00	118.00
322	14	36	130	72.00	84.00	95.00	114.00	142.00
323	11/2	42	150	84.00	97.00	110.00	132.00	160.00
324	2	30	140	90.00	101.00	112.00	132.00	160.00
325	2	36	170	105.00	118.00	130.00	154.00	190.00
326	2	42	220	120.00	134.00	148.00	176.00	220.00

#### PERFORATED SHEET BRASS.

WIDTH	48	$5\frac{\delta}{16}$	6 <del>1</del>	78	9‡	11	12	141
SUITABLE FOR POINTS	.14	1‡ .18	$\frac{1\frac{1}{2}}{.20}$	.25	$\frac{2\frac{1}{2}}{.30}$	3 .35	.40	4 .44

#### BRASS WIRE CLOTH.

MESH BRASS WIRE CLOTH	40	50	60	80	90	100	120
MADE FROM WIRE	33	35	36	38	39	40	40
	.40	.50	.60	1.00	1.20	1.50	3.00



J-420.

#### FLUSH OR TUBULAR WELL POINTS.-J-420.

Trade No	Diameter. Inches.	Length of Jacket. Inches.	Length of Point. Inches	No of Holes.	No 60 Gauze, Per Dozen.	No 70 Gauze, Per Dozen.	No 80 Gauze Per Dozen.	No. 90 Gauze Per Dozen	No. 100 Gauze Per Dozen
73	1	18	30	72	34.00	40.00	45.00	50,00	55.00
7.5	1	18	36	72	38.00	44.00	50.00	56.00	66.00
754	1	24	36	96	43.00	49.00	55.00	62.00	77.00
77	1	24	4.5	96	47.00	54.00	60.00	68.00	82.00
774	1	30	42	120	52.00	59.00	65.00	74.00	93.00
79	1	30	. 48	120	56.00	63.00	70.00	80.00	98.00
794	1	36	48	144	61.00	68.00	75.00	86.00	109.00
81	1	36	54	144	65.00	73.00	80.00	92.00	114.00
814	1	42	54	144	70.00	78 00	85.00	98.00	125.00
83	1	42	60	168	74.00	82.00	90.00	104.00	130.00
116	11	18	24	100	36.00	44 00	52.00	60.00	80.00
117	11	18	30	100	41.00	49 00	57.00	65 00	85.00
1171	1 5	24	30	130	46.00	55.00	64.00	75.00	100.00
118	11	24	36	130	51.00	60.00	68.00	80.00	105.00
119	1‡	24	42	130	56.00	65.00	73.00	85.00	110.00
120	1 ‡	24.	48	130	61.00	70.00	78.00	90.00	115.00
121	11	30	36	16,5	56.00	66.00	76.00	90 00	120.00
122	1 ‡	30	42	165	61.00	71.00	80.00	95.00	125.00
123	1‡	30	48	165	66.00	76.00	85.00	100.00	130.00
124	1 ‡	30	54	165	71.00	81.00	91.00	105.00	135.00
125	1 1	36	42	200	66.00	77.00	88.00	105.00	140.00
126	11	36	48	200	71.00	82.00	92.00	110.00	145.00
127	11	36	54	200	76.00	87.00	97.00	115.00	150.00
128	1‡	36	60	200	81.00	92.00	102 00	120.00	155.00
130	1 ‡	42	54	230	81.00	92.00	104.00	125.00	165.00
1301	11	42	60	230	86.00	98.00	110.00	130.00	170.00
131	11	4.2	66	230	91.00	103 00	115.00	135.00	L75.00
132	1 1	48	60	260	91.00	104.00	116.00	140.00	180.00
133	1 }	48	66	260	96.00	109.00	122.00	145.00	185.00
135	11	48	7.2	260	101.00	114 00	127.00	150 00	190.00

#### MALLEABLE IRON DRIVE CAPS.

SIZE	NCHES	1‡	1½	2
EACH		40	. 50	.70

These Caps are made especially for driving Well Points, and are the cheapest and best ever made. They are twice as heavy as the ordinary cap, and have a heavy head, which adds greatly to its strength. They are fully as good as the iron drive head, and cost very much less.

#### MALLEABLE PUMP ROD COUPLINGS.

SIZE INCHES	를	8 x 18	18	÷
BLACK PER FOUND GALVANIZED PER POUND	.16 .20	.16	.16 .	.16

#### GREENHOUSE PIPE AND FITTINGS.

TESTED AND GUARANTEED.



GREENHOUSE WATER PIPE .- J-450. (Lengths 5 Feet.)

SIZE	2	3	4	5	6	8
PER FOOT	. 24	30	40	50	60	1.25









J-455, RETURN BEND.

J-457. RETURN BEND, DOUBLE HUB.

J-459. RETURN BEND, SPIGOT OUTLET.

J-461. RETURN BEND, HUB OUTLET,

#### RETURN BENDS FOR 4-INCH PIPE.

FIGURE	J-455	J-457.	J-459.	J-461.
EACH	1.25	1.50	1.75	1.75









J-463. H BRANCH.

J-465. DOUBLE ELBOW

J-467. TRIPLE ELBOW.

J-469. THREE-WAY

#### BRANCH FITTINGS FOR 4-INCH PIPE.

FIGURE	J-463.	J-465.	J-467.	J-469.
EACH	1.75	2.00	2.75	2.75



J-471. QUARTER BEND.



QUARTER BEND, DOUBLE HUB.



T BRANCH





DOUBLE HUB.

SIZE INCHES	2	3	4	5	6	4 x 3	4 x 2	5 x 4	5 x 3	6 x 5	6 x 4
J-471. QUARTER BEND J-473. QUARTER BEND J-475. T BRANCH J-477. CROSS. J-479. DOUBLE HUB		.55 .85 .80 1.25 .45	.75 .95 1.20 1.65 .65	1.00 1.30 1.60 2.25 .75	1.20 1.50 2.00 3.00 .80	1.20	1.20 1.65	1.60 2.25	1.60 2.25	2.00	2.00

Oakum, see page 198. Calking Tools, see pages 243 and 248.









GREENHOUSE VALVE.

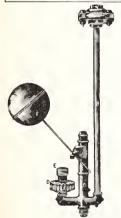
BUTTERFLY VALVE.

ROOF	AND	POST	PLATES	J-490	and J-491.	
	_					

SIZE		1	1‡	1 ½
ROOF AND POST PLATE	PER SET	85	1.00	1 25

#### BUTTERFLY AND GREENHOUSE VALVES.

FIGURE	 	 	 	J-495	J-497
EACH	 	 	 	3.50	5.50



J-520. WITH AUTOMATIC ATTACHMENT.



J-521. SECTIONAL VIEW OF DRAINER VALVE



J-522, WITHOUT AUTOMATIC ATTACHMENT.

#### CLIMAX DRAINERS.-J-520 and J-522.

NUMBER	1	2	3	4	5	6
CAPACITY GALLONS PER HOUR WITH AUTOMATIC MOVEMENT EACH WITHOUT AUTOMATIC MOVEMENT EACH	50	100	150	200	275	350
	r25.00	40.00	55.00	80.00	110.00	160.00
	15.00	25.00	35.00	50.00	70.00	100.00

The capacity given above is based on a pressure of from 15 to 20 pounds, and on a lift of from 6 to 7 feet. The capacity

depends entirely on the amonat of water-pressure of from 15 to 20 pounds, and on a lift of from 0 to 7 feet. The capacity depends entirely on the amonat of water-pressure obtainable and lift.

The Climax Cellar Drainer is made for draining Cellars, Wheel Pits, Furnace Pits, etc., at the least possible expense and in a permanent and positively satisfactory manner. It is also desirable and largely used for removing waste-water from kitchens below level of sewer and removing drippings from ice boxes, and for any purpose where it is necessary to remove water economically from one level to a higher one.

Descriptive Circular sent upon application.

#### TOOLS.



L-1. DIE PLATE NUMBER 2.

DIE PLATES.-L-1.
WITH HILL'S PATENT SOLID DIES.

Numbers	Threads.	Dimensions of Dies	Die Plate Complete.	Without Dies	Extre Dies.	Extra Bushings.	Extra Die Frames.
00 FOR BRASS PIPE	\$, \frac{1}{4}, \frac{1}{6}, \f	$\begin{array}{c} 2 \times 2 \times \frac{1}{2} \\ 2 \times 2 \times \frac{1}{2} \\ 2 \frac{1}{2} \times 2 \frac{1}{2} \times \frac{3}{4} \\ 3 \times 3 \times \frac{3}{4} \\ 4 \times 4 \times \frac{7}{8} \\ 5 \times 5 \times 1\frac{1}{4} \\ 5 \times 5 \times 1\frac{1}{4} \end{array}$	13.50 9.50 15.00 13.50 13.50 20.00 43.00 51.00	3.50 3.50 5.00 6.00 6.00 9.50 25.00 33.00	2.00 1.50 2.00 2.50 2.50 3.50 9.00 9.00	.25 .25 .35 .45 .45 .60 1.00	.30 .40 .40 .50 .60

No. 2 and larger have Leader Screw.

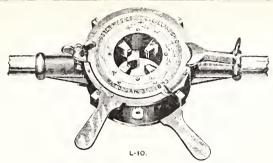


L-5. MILLER'S REVERSIBLE RATCHET DIE PLATE.

# MILLER'S REVERSIBLE RATCHET DIE PLATES.-L-5. WITH HILL'S PATENT SOLID DIES.

Numbers.	Threads. Dimen	lons, Die Plate	Without Dire	Extra Dics	Extra Bushings.	Extre Die Frames.
A	# to # 2 x 2 2 ½ x 2 2 ½ x 2 2 2 2 2 2 3 3 3 3 3 3 5 5 5 5	$\begin{array}{cccc} \frac{1}{2} & x & \frac{3}{4} & & 15.00 \\ x & \frac{3}{4} & & 18.50 \\ x & \frac{3}{4} & & 20.00 \end{array}$	7.50 7.50 13.00 12.50 29.00	1.10 1.50 1.80 2.50 7.00	.20 .25 .35 .45	.22 .30 .38 .45

C, D, and E have Leader Screws.



OSTER PATENT ADJUSTABLE DIE STOCKS.

NUMBER OF TOOL	0	1	1 !	2	3	4	4}	5	6
SIZES OF PIPE EACH TOOL WILL THREAD AND CUT	1 1 1	1-3 1-3 1-3	$\frac{\frac{1}{4} - \frac{3}{8}}{\frac{1}{2} - \frac{3}{4}}$	1-3 1-3 1-14	$1-1\frac{1}{4}$ $1\frac{1}{2}-2$	$\begin{array}{c} \frac{1}{2} - \frac{3}{4} \\ 1 - 1 \frac{1}{4} \\ 1 \frac{1}{2} - 2 \end{array}$	3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1-2 2 1-3	$2\frac{1}{2}-3$ $3\frac{1}{2}-4$
WITHOUT CUT-OFF EACH	12.00 15.00	13.00 16.00	14.00 17.00	17.00 20.00	22.00 25.00	25.00 28.00	28.00 31.00	40,00 45.00	55.00 60.00

All the above tools have two handles, as illustrated, except Nos. 5 and 6, which have four solid steel handles. The dies can be sharpened on a grindstone, like edged tools.

Instantly adjusted, and released from the work without running back over the finished threads.



L-12. OSTER RATCHET STOCK STYLE NO. 7 TO 10.

#### OSTER PATENT RATCHET DIE STOCKS.

NUMBER OF TOOL	7	8	9	91	10
THREADS PIPE SIZES	$1, 1\frac{1}{4}, 1\frac{1}{2}, 2.$	$2\frac{1}{2}$ , 3, $3\frac{1}{2}$ , 4.	$3, 3\frac{1}{2}, 4, 4\frac{1}{2}.$	$3\frac{1}{2}$ , 4, $4\frac{1}{2}$ , 5,	$2\frac{1}{2}$ , $3$ , $3\frac{1}{2}$ , $4$ , $4\frac{1}{7}$ , $5$ .
WITHOUT CUT-OFF EACH	25.00	60.00	70.00	70.00	75.00
WITH CUT-OFF EACH	28.00	65.00	75.00	75.00	80.00

#### EXTRA DIES AND CUT-OFF BLADES.

NUMBER OF TOOL	0	1	1 }	2	3	4	41/2	5	6.	7	8	9	91	10
PER SET (4 PIECES) RIGHT OR LEFT NUMBER OF SETS TO EACH TOOL	3	1.50	1.50	3	2	3	2.50 4	3,00	$\frac{3.50}{2}$	2.50	3.50 2	4.50	4.50 2	4.50
CUT-OFF BLADES EACH	.30	. 30	. 30	. 30	. 30	. 30	.40	.40	. 40	.75	. 85	1.15	1.15	1.15



L-20. ARMSTRONG. NO. 2.



L-21. ARMSTRONG, NO. 25

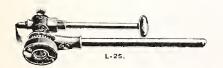
#### ARMSTRONG'S ADJUSTABLE STOCKS AND DIES.

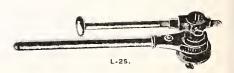
NUMBER	1	2	2 ½	3	4	6	î
THREADS. COMPLETE, WITH RIGHT HAND DIES STOCK ONLY. EXTRA DIES, RIGHT OR LEFT. EXTRA BUSHINGS. EXTRA WRENCHES.	$\begin{array}{c} \frac{1}{8} \text{ to } \frac{1}{2} \\ 9.00 \\ 3.25 \\ 1.25 \\ .20 \\ .25 \end{array}$	‡ to 1 12.00 4.00 1.50 .25 .25	½ to 1¼ 12.00 4.50 3.25 .40 .25	1½ to 2 20.00 7.00 4.00 .50	1½ to 2 18.00 7.00 3.00 .50	2½ and 3 40.00 25.00 15.00 1.00 .50	2½ to 4 60.00 30.00 16.00 1.50

Price for Extra Dies means per Single Set of two pieces.

NOTE.—No. 4 Stock is a sectional and non-adjustable stock. Nos. 2½, 6, and 7 Stocks are fitted with double-ended dies. Nos. 1 and 2 Stocks are packed in cases, as shown in L-20. Nos. 6 and 7 have four arms.

Armstrong Sectional Dies, Right or Left, all sizes, each, \$3.00,





#### CLIMAX RATCHET STOCKS.-L-25.

NUMBER	1	2
THREADS	1 to 1	1 to 2
STOCK ONLY		17.00 3.50
SOLID DIES	2.00	3.30

Any standard make of Solid Die will fit.

Threads can be cut on pipe at any angle or in any position.

With this tool it is not necessary to dig up or take out whole lengths of pipe; the defective part of pipe can be cut out and the threads cut on the pieces in the ground with the greatest ease and convenience, not only saving time, but avoiding much unnecessary and disagreeable work.



L-35. GREEN RIVER SCREW PLATE.

Set 100.—No. 1.—\(^2\eta\) to \(^1\eta\) inch. Stock 10 inches long. With both stock and brace holder for dies. Fire sizes, \(^1\eta\), \(^1\eta\), \(^1\eta\), \(^1\eta\) inch. Stock 10 inches long. With both stock and brace holder for dies. Fire sizes, \(^1\eta\), \(^1	Set 113.—No. 6.—½ to 1½ inch. Stock 35 inches long. Seven sizes, ½, ½, ½, ¼, 1, ½, 1½ inch taps, dies and gnides. Diameter of dies in this set, 2½ inches. Complete, in case
Set 105.—Xo. 2.—† to \$\frac{1}{2}\$ inch. Stock 23 inches long. Seven sizes, \$\frac{1}{2}, \frac{1}{2}6\$, \$\frac{1}{2}8\$, \$\frac{1}{2}8\$, \$\frac{1}{2}\$, \$\frac{3}{2}\$, \$\frac{3}{2}\$ inch taps, dies and guides. Diameter of dies in this set \$2\frac{7}{2}\$ inches. Complete, in case	one 22 inches and one 29 inches long, and \$\frac{1}{7}\tilde{\epsilon}, \frac{1}{8}\tilde{\gamma}, \frac{1}{8}\tilde{\gamma}, \frac{1}{8}\tilde{\gamma}, \frac{1}{8}\tilde{\gamma}, \frac{1}{8}\tilde{\gamma}\tilde{\gamma} \tilde{\gamma} \tilde \tilde{\gamma} \tilde{\gamma} \tilde{\gamma} \tilde{\gamma} \til
Set 107.—No. 3.—1 to 1 inch. Stock 29 inches long. Five sizes, \(\frac{1}{3}\), \(\frac{3}{3}\), \(\frac{1}{3}\), \(\frac{1}{3}\), \(\frac{1}{3}\), \(\frac{1}{3}\), \(\frac{1}{3}\) inches. Complete, in case	Set 119.—No. 16.—† to 1½ inch, 11 sizes. Two stocks, one 22 inches long and one 35 inches long, and 4, 76, 8, 76, ½, 8, 3, ¾, 1, 11, 1½ inch taps, dies and guides. Diameter of dies in this set, 76 inch and under, 276 inches. Diameter of dies in set, 1 inch over, 23 inches. Complete, in case . 36.00
Seven sizes, $\frac{3}{5}$ , $\frac{7}{16}$ , $\frac{1}{5}$ , $\frac{3}{5}$ , $\frac{3}{5}$ , $\frac{3}{5}$ , $\frac{1}{5}$ inch taps, dies and guides. Diameter of dies in this set $\frac{23}{5}$ inches. 20.00 Set 111.—No. 5.— $\frac{1}{5}$ to 1 inch. Stock 29 inches long. Nine sizes, $\frac{1}{5}$ , $\frac{7}{6}$ , $\frac{3}{5}$ , $\frac{7}{5}$ , $\frac{3}{5}$ , $\frac{3}{5}$ , $\frac{3}{5}$ , $\frac{1}{5}$ , inch taps, dies and guides. Diameter of dies in this set $\frac{23}{5}$ inches. Complete, in case 23.00	Set 120.—No. 25.— $\frac{1}{4}$ to $1\frac{1}{2}$ inch, 13 sizes. Two stocks, one 22 inches long and one 53 inches long, and $\frac{1}{4}$ , $\frac{7}{6}$ , $\frac{3}{6}$ , $\frac{7}{4}$ , $\frac{1}{6}$ , $\frac{3}{6}$ , $\frac{1}{6}$ , $\frac{3}{6}$ , $\frac{1}{6}$ , $\frac{1}{6}$ , $\frac{1}{6}$ , $\frac{1}{1}$ inch taps, dies and guides. Diameter of dies in this set, $\frac{3}{4}$ inch and under, $2\frac{1}{16}$ inches. Diameter of dies in this set $\frac{3}{4}$ inch and over, $3\frac{1}{16}$ inches. Complete, in case

These Screw Plates furnished with adjustable tap wrenches when so ordered, at different list.



#### L-45. SINGLE STOCK AND DIE.

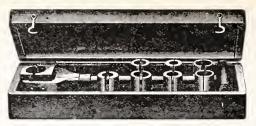
L-50. DOUBLE STOCK AND DIES.

#### LIGHTNING PUMP ROD STOCKS AND DIES.-L-45 and L-50.

	L-45.—Complete, with one \(\frac{1}{2}\)-inch Die, 1.70 L-45.—With one \(\frac{1}{2}\)-inch Die, 1.90 L-45.—With one \(\frac{1}{2}\)-inch Die, 2.20	
	Dies only, each, $\frac{3}{3}$ -inch . 1.15 $\frac{7}{6}$ -inch 1.30 $\frac{1}{2}$ -inch 1.50	Ш
	L-50. — Double Stock, with one a inch and one of inch and one	ı
H	Dies only for Double Stock, each, §-inch 1.00 Te-inch	ij



L-40. For Use in Bir Brace.—Holders, each, 75 cents; Dies, each, \$1.00; Gnides, each, 20 cents; Dies with Guide, each, \$1.20. Taps, 71 inch, each, 70 cents; smaller sizes, each, 60 cents.



L-60. HALL BRASS PIPE WRENCH.
THE HALL BRASS PIPE WRENCH.

NO. 1 GRIPS, 34, 9a, 35, 84, 1 IN. IRON SIZE PIPE, AND 86, 84, 74, 1-IN. TUBING	7.50
NO. 2 GRIPS, 1, 114, 122, 2 IN. IRON SIZE PIPE, AND 114, 115, 134, 2-IN. TUBING	12.00
EXTRA-BUSHINGS, NO. 1	, 50
EXTRA BUSHINGS, NO. 2	1.00

#### GLEASON'S STOCK AND DIES FOR BRASS PIPE.-L-65.

THREADS, 38, 59, 58, 34, 78-INCH TUBING . . . . . . . . . . . . COMPLETE 15.00

Warranted the cheapest and best Tool for the purpose in use.



L-70. PIPE END REAMER



#### PIPE END REAMERS.-L-70 and L-71.

L-70 ... EACH 5.00

A simple and durable Tool for removing Burrs from the ends of Wrought Iron and Steel Pipe from § to 3-inch inclusive. With this tool the burr is entirely removed and not spread.



L-75. TRIMO PIPE CUTTER.

#### TRIMO PIPE CUTTERS With Two Extra Wheels in Handle).

NUMBER				 									1	2	3
CUTS PIPE												CHES	å to 14 4.25	½ to 2 6.25	1½ to 3 12.25
EXTRA WHEELS EXTRA ROLLS						 					. !	EACH EACH	.30 .25	.30	.40



L-80, STANWOOD IMPROVED CUTTER.

#### STANWOOD IMPROVED PIPE CUTTERS. L-80.

NUMBER	1	5	3
CUTS PIPE         INCHES           EACH            EXTRA BLOCKS AND WHEELS            EXTRA WHEELS            EACH	1.50 .45 .12	1 to 2 2.25 .60 .18 .05	2 to 3 7.00 1.25 .25 .08



#### SAUNDERS PIPE CUTTERS.-L-83.

NUMBER			3
CUTS PIPE         INCHES           EACH            EXTRA BLOCKS AND WHEELS            EXTRA WHEELS            EXTRA ROLLERS	1 to 1 3.00 1.25 .24	1 to 2 4.50 1.75 .32 .32	2 to 3 14,00 3.25 .60 .50

#### BARNES 3-WHEEL PIPE CUTTERS.-L-86.

NUMBER	1	2	3	4	5	6	7
CUTS PIPE . INCHES EACH	\$ to 1 4.50 .25 1.00	1 to 2 6.00 .30 1.00	$ \begin{array}{c} 1\frac{1}{2} \text{ to } 3 \\ 10.00 \\ .40 \\ 1.00 \end{array} $	2½ to 4 20.00 .50 2.00	4 to 6 30.00 .75 2.00	6 to 8 40.00 .75 2.00	9 to 12 50.00 .75 2.00

No. 64 (Special Size) cuts Pipe 8 to 10 inches. Each, \$45.00.



#### L-89. MILLER'S RATCHET PIPE CUTTER.

#### MILLER'S REVERSIBLE RATCHET PIPE CUTTERS.-L-89.

NUMBER	0	1	1 ½	2	3
CUTS PIPE . INCHES EACH	18 to 4	½ to 1	1 to 1½	1‡ to 2	2½ to 3
	6.75	8.50	10.00	11.00	16.00
	.12	.18	.18	.25	.40



L-95. STILLSON WRENCH, 6 TO 18 INCHES.



L-96. STILLSON WRENCH, 18 TO 48 INCHES.



L-97. JAW.





L-99, HANDLE,



L-100. NUT.

#### STILLSON WRENCHES.

LENGTH WHEN OPEN INCHES	6	8	10	14	18	24	36	48
GRIPS {	wire to pipe	d wire	wire wire pipe	1 wire to 11 pipe	l wire	¼ wire 2½ pipe	† pipe	1 pipe 5 pipe
EACH	2.00	2.00	2.25	3.00	4.00	6.00	12.00	18.00

#### REPAIRS FOR STILLSON WRENCHES.

SIZE	INCHES	6	8	10	14	18	24	36	48
JAWS	_ EACH	. 67 .25	. 67 . 25 . 15	.75 .33 .20	1.00 .45 .25	1.33 .55 .30	2.00	4.00	6.00 1.00
NUTS		.20	. 20	.27	.35	.42	.50	. 65	.80



L-110. TRIMO PIPE WRENCH



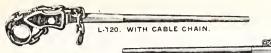
L-113. REPAIRS FOR TRIMO WRENCH.

#### TRIMO WRENCHES .- L-110.

LENGTH WHEN OPEN INCHES	6 8	- 10	14	18	24	36	48
GRIPS ( INCHES	Lo to	to			d wire		1 pipe 5 pipe
EACH	2.00 2.00	2.25		4.00	6.00	12.00	18.00

#### REPAIRS FOR TRIMO WRENCHES .- L-113.

SIZE INCHES	6	8	10	14	18	24.	36	48
JAWS         EACH           NUTS         EACH           INSERTED JAWS         EACH           FRAMES         EACH	. 67	. 67	.75	1.00	1.33	2.00	4.00	6.00
	. 20	. 20	.27	.35	.42	.50	.65	-80
	. 25	. 25	.33	.50	.55	.65	1.00	1.25
	. 25	. 25	.33	.45	.55	.65	.75	1.00





#### THE VULCAN PATENT DROP-FORGED CHAIN PIPE WRENCHES.

NUMBER	10	11	12	13	13½	14	15
FOR PIPE INCHES WITH CABLE CHAIN EACH WITH FLAT-LINK CHAIN EACH EXTRA CABLE CHAIN EACH EXTRA FLAT-LINK CHAIN EACH EXTRA JAWS PAIR LENGTH OVER ALL INCHES	\$ to \$\frac{3}{2}\$.25 2.25 2.50 .50 .75 1.00 13\$	$ \begin{array}{c} \frac{1}{8} \text{ to } 1\frac{1}{2} \\ 3.25 \\ 3.50 \\ .75 \\ 1.00 \\ 1.75 \\ 20 \end{array} $	\$ to 2\frac{1}{2}\$ 4.50 5.00 1.00 1.50 2.75 27	\$\frac{4}{6.25}\$ 7.00 1.75 2.50 4.00 37	1 to 6 7.75 9.00 2.00 3.25 4.75 44½	1½ to 8 9.50 11.00 2.50 4.00 5.50 50½	2 to 12 16.00 18.00 4.00 6.00 7.50 64}

The Vulcan Wrench is sold with either cable or flat-link chain, and is the only wrench adapted for either. When ordering, say which chain is desired.

This Wrench is equally efficient on fittings and straight pipe, in corners, against walls, between floors, in ditches, or for overhead work. Each fits a range of sizes equal to six pairs of common tongs, and will outwear several pairs of any kind.

These tools are fully guaranteed and are recommended as the most efficient and economical chain pipe wrenches made.

Nothing is spared in their manufacture that adds to their working and wearing qualities.

All parts are interchangeable; repairs can always be had.



L-125. ROBBINS' CHAIN TONGS.

#### ROBBINS' CHAIN TONGS.-L-125.

NUMBER	2	3	4	5	6	7
LENGTH OF LEVER INCHES WEIGHT POUNDS FOR PIPE INCHES EACH	27	36	48	60	72	84
	7	12	24	33	50	100
	1 to 2	1¼ to 4	2 to 6	2½ to 8	4 to 10	4 to 16
	5.50	6.25	9.00	12.50	16.00	30.00







L-131. BROWN'S ADJUSTABLE TONGS.

SIZE INCHES	18	1	3	1/2	3	1	14	11/2	2	21	3	3 <sup>‡</sup>	4
EACH	.60	.65	.70	.75	. 90	1.10	1.30	1.50	-1.90	2.50	4.25	5.25	6.25

#### BROWN'S ADJUSTABLE TONGS.-L-131.

NUMBER	1	13	3	3	4	5	6	7
FOR PIPE INCHES	to 3	å to 1	1 to 11	1 to 2	1½ to 3	2½ to 4	3 to 5	4 to 7
	1.30	1.65	2.00	3.00	6.00	11.00	25.00	35.00





L-138. ENGINEER'S WRENCH ,

L-14D. COES' WRENCH.

#### ENGINEER'S AND GENUINE COES' WRENCHES.-L-138 and L-140.

SIZE INCHES	6	3	10	12	15	18	31
ENGINEER'S WRENCHES, BLACK	9,00	10.00 10.00	12.00 12.00	14.00 14.00		30.00 30.00	36.00 36.00





L-142. ALLIGATOR WRENCH.

L-14S. PEASE COMBINATION PLIERS.

#### ALLIGATOR WRENCH.-L-142.

NUMBER	1	2	3	4	5
HOLDS PIPE . INCHES PER DOZEN	to §	\$ to \$ 12.00	½ to 1¼ 24.00	1½ to 2 36.00	2 to 3 54.00

#### PEASE COMBINATION PLIERS.-L-145.

SIZE INCHES	6	10
NICKEL PLATED. GAS PLIER, WIRE CUTTER AND SCREW DRIVER COMBINED EACH	1.25	1.75



L-148, BURNER PLIERS, 5 AND 6-INCH.

L-1SD. GAS PLIERS, 7 TO 14-INCH.

#### BURNER AND GAS PLIERS.-L-148 and L-150.

SIZE INCHES	5	6	7	8	9	10	12	14
PER DOZEN	6.00	6.00	7.40	S.25	9.25	10.70	13.00	17.00



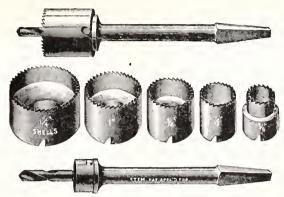




L-16D. TRIMO HANDY POCKET WRENCH.

L-155.	NONPAREIL RATCHET WRENCHES. NO. 2, JAWS OPEN 14 INCHES	2.50
L-160.	TRIMO HANDY POCKET WRENCH, WITH SCREW DRIVER AND GAS TIP CLEANER. NICKEL PLATED . EACH	2.50

We can furnish promptly any of the Nonpareil combinations, such as Socket Wrenches, Ratchet Drills and Ratchet Stud Drivers. Special Catalogue furnished upon application.



COMBINATION SHELL DRILL .- L-170.

FOR DRILLING STOVES FOR NATURAL GAS AND WATER-BACK CONNECTIONS; ENAMELED STEEL AND IRON BATH TUBS, SINKS, WASH TRAYS AND CAST-IRON PIPE.

IRON PIPE, SIZE OF SHELLS INCHES	3	1/2	3	* 1	1‡	1 ½	2
SHELLS ONLY EACH	1.75	1.75	2.25	2.50	2.75	3.00	4,00
STEM, WITH CENTER DRILL						EACH	.75



L-175. TWIST DRILL, TAPER SHANK.



L-176. TWIST DRILL, 15-INCH SHANK.



All sizes kept in stock.

THE PARTY AND TH

L-178. BIT STOCK TWIST DRILL.

SCHTHING.

L-179. STRAIGHT FLUTED DRILL.



L-185. PIPE TAP.



L-186. PIPE REAMER.



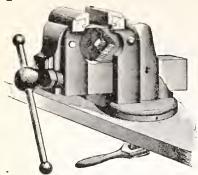
L-187.
COMBINED TAP, REAMER AND DRILL.



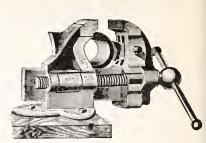
L-19D. FLAT DRILL.

PIPE TAPS, REAMERS, AND DRILLS.

SIZE	į,	4	3 8	į	3	1	14	14	2	2 ½	3
	1.12	$\begin{array}{c} 1.25 \\ 2.50 \end{array}$	$\begin{smallmatrix}1.50\\2.50\end{smallmatrix}$	$\frac{1.87}{3.00}$	$\frac{2.50}{4.50}$	$\frac{3.12}{6.00}$	$\frac{3.75}{7.25}$	$\frac{4,62}{8,50}$	$\frac{6.25}{10.75}$	10.50	15.00



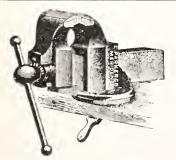




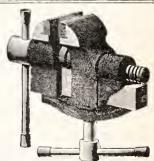
L-204. PARKER HOLD-FAST COMBINATION VISE.

#### PARKER COMBINATION VISES,-L-200 and L-204.

NUMBER	1	2	3	4
HOLOS PIPE FROM	to 2 41 16.00 1.75 .50	\$ to 3 59 20.00 2.00 .50	to 4 94 28.00 2.50	t to 6 141 35.00 3.00 .75
L-204. HOLOS PIPE FROM L-204			½ to 2 8.50	½ to 3 11.00



L-208. PARKER HEAVY RAILWAY VISE.



L-210. BENCH VISE, 5-INCH JAW.

#### PARKER HEAVY RAILWAY VISE,- L-208.

LENGTH OF JAWS B% INCHES; WEIGHT, 250 LBS.; OPENS 1212 INCHES	55.00

This Vise is recommended for use in Railway and Machine Shops, being especially strong and durable. Practical tests have occasioned its adoption by many of the leading Railroad Companies.

#### BENCH VISES .- L-210.

ſ		
1	FOR PIPE 16 TO 6 INCHES	EACH 18.00
1	EXTRA JAWS	2.25







L-218. ARMSTRONG VISE.



L-221. ANGLE PLATE VISE.



L-224. KLINGFAST VISE.

#### MALLEABLE HINGE VISES .- L-215.

NUMBER	_							 	_		-	_	_		 -		-									. 1		2
HOLDS PIPE FROM		-	-	-	 -	-	-	 -	-	-	-	-	-	-		-	-	-	-	-	-	-	-	IN	CHES	1 to 2		½ to 3
EACH	-		-	-	 -	-	-	 	-	-	-	-	-	-	 -	-	-	-		-	-	-	-	-		. 10.00 E 1.00		14.00
EXTRA JAWS	-		_	-	 -	-		 	-	-	-	-	-	_		-	-	_	-		ER	36		1	HKLE	1.00	_[	1.50

#### ARMSTRONG HINGE VISES.-L-218.

NUMBER		1 2
		½ to 2½ ½ to 4½
EACH	 	10.00 20.00

#### ANGLE PLATE VISES.-L-221.

NUMBER	 		_ 1	2
HOLDS PIPE FROM	 	INCHE	s 12.00	1 to 3
Enotit	 		- 12.00	18.00

#### KLINGFAST PIPE VISES.-L-224.

HOLDS PIPE FROM	 	l to 2
EACH	 	3.00



PROSSER'S SPRING TUBE EXPANDER.



L-237. HENDERER ROLLER TUBE EXPANDER.

#### TUBE EXPANDERS,-L-235 and L-237.

SIZE . INCHES	1	1‡	11	13	2	21	2 }	23	3	31	31/2	33	4	5	6
	8.00 10.00														60.00



L-245. BARD ADJUSTABLE BUSHING.

#### BARD ADJUSTABLE BUSHING, FOR HAND DIE STOCKS.

NUMBER	1	2	$5\bar{7}$	3
FITTING DIE STOCK, THREADING FROM	1 In. Down.	1 In. Down.	1‡ In. Down.	2 In. Down.
	4.50	5.00	6.00	8.00

Descriptive circular sent upon application. In ordering, give make of Die Stock.



L-250. U. S. ANVIL. WROUGHT IRON, STEEL FACE.

-		_	_	_	 	_	_	 _		_	
	50 TO 500 POUNDS							PER	LB.		



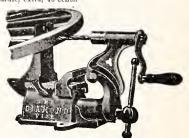
L-255. ENTERPRISE ANVIL. SIZE OF FACE, 3X5 INCHES,

					 	-	 _	,		
EACH									1.00	

Hardie, extra, 40 cents.



L-260. DIAMOND VISE.



L-261. DIAMOND VISE, WITH DRILL ATTACHMENT.

DIAMOND VISES. L-260 and L-261.

l	VISE ONLY	ACH 4.50
ı	VISE WITH DRILL ATTACHMENT	ACH 7.50
ι		

Anvil face 3 x 7, polished and hardened. To hold pipe, move small jaw back one notch. Three sharp jaws, 4 inches long, clamp pipe up to 2 inches.







L-272.
DOUBLE FACE ENGINEERS' HAMMER.

#### MACHINISTS' HAMMERS, BALL PEIN.-L-270.

WEIGHT	8 oz.	12 oz.	1 lb.	1 lb. 4 oz.	1 lb. 8 oz.	2 lb.	2 lb. 8 oz.	3 lb.
PER DOZEN	12.00	12.00	12.50	13.50	14.50	16.50	19.00	22.00

#### ENGINEERS' HAMMERS, DOUBLE FACE.-L-272.

WEIGHT	1 lb. 8 oz.	2 lb. 6 oz.	3 lb.	3 lb. 10 oz.
PER DOZEN	14.50	16.50	18.00	19.50



L-274. ENGINEERS' HAMMER.



L-276. RIVETING HAMMER.

#### ENGINEERS' HAMMERS.-L-274.

WEIGHT	1 lb, 2 oz.	1 lb. 10 oz.	2 lb.	2 lb, 8 oz.	3 lb.	3 lb. 8 oz.	4 lb. 8 oz.
PER DOZEN	12.00	13.00	14.00	15.00	16.00	17.00	19.00

#### RIVETING HAMMERS, ADZE EYE .- L-276.

WEIGHT	6 oz.	9 oz.	12 oz.	1 lb.	1 lb. 4 oz.
PER DOZEN	7.00	7.50	8.00	8.50	9.00



L-278. NAIL HAMMER.



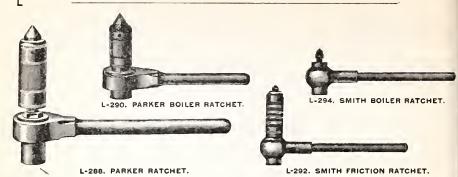
L-280. SLEDGE.

#### NAIL HAMMERS, ADZE EYE.-L-278.

WEIGHT	13 oz.	1 lb.	1 lb. 4 oz.
NICKEL PLATED	13.00	13.50	14.00

#### SLEDGES.-L-280,

WEIGHT	4 lb.	6 lb.	8 lb.	10 lb.
EACH	1.20	1.80	2.40	3.00



#### RATCHETS.

NUMBER	1	2	3	4	5
LENGTH OF HANDLE     INCHES       L-288     EACH       L-290     EACH       L-292     EACH       L-294     EACH	10 5.75 5.50 10.00 9.00	12 6.00 6.00 12.00 10.50	15 7.00 15.00 13.50	7.50	20 8.00 23.00



L-30

#### GAS FITTERS' AUGERS,-L-300.

NUMBER	1	2	3	4	5	6	7	8	9
DIAMETER OF AUGER INCHES SIZE OF PIPE INCHES EACH	\$ 1 .80	\$ .90	$\frac{\frac{7}{8}}{\frac{1}{2}}$ 1.05	1 <del>1</del>	$\frac{1\frac{1}{2}}{1}$ 1.75	$\frac{1\frac{5}{4}}{1\frac{1}{4}}$ 2.10	$\frac{2}{1\frac{1}{2}}$ $2.40$	$\frac{2\frac{1}{2}}{2}$ 3.00	3 2½ 3.60

In ordering Augers, state pipe size.



L-303. LOWELL RATCHET WRENCH.



L-306. PILLEY FLUE BRUSH.

#### LOWELL RATCHET WRENCHES.-L-303.

NUMBER	1	- 2	3	4
SIZE OF SQUARE GEAR INCHES SIZE OF HEXAGON GEAR INCHES WITH ONE GEAR ONLY EACH EXTRA GEARS EACH	8, ½, 8 8, ¾, 3.00 .50	1, 8, 4 2, 7, 1 4.00 .60	$\frac{3}{4}, \frac{7}{8}, 1, 1\frac{1}{8}$ $1, 1\frac{1}{8}, 1\frac{1}{4}$ $5.00$ $.75$	1½, 1½, 1½, 1½ 1½, 1½, 1¾ 7.00 1.00

#### PILLEY COMBINATION FLUE BRUSH AND SCRAPER.-L-306.

DIAMETER	. INCHES	2	21	21/2	23	3	3 ‡	31	4	41/2	5	6
EACH		2.00	2.25	2.50	2.75	3.00	3.25	3.50	4.00	4.50	5.00	6.00





L-310. RED JACKET FLUE CLEANER.

L-312. ENGINEERS' FAVORITE.

#### RED JACKET STEAM FLUE CLEANERS. L-310.

NUMBER		0	2	3	4	õ	6
SIZE OF TUBES, OUTSIDE DIAMETER . WITH CLAMPS AND NIPPLE	EACH	5.00 5.	00 6.25	7.50	8.75	10.00	12.50

The above prices do not include hose.

#### ENGINEERS' FAVORITE CLEANERS.-L-312.

SIZE	INCHES 13	2	21	21/2	23	3	31	3 }	4	41	5	6
EACH	2.00	2.00	2.25	2.50	2.75	3.00	3.25	3.50	4.00	4.50	6.25	7.50



1-314 STEEL WIRE TURE CLEANER.



L-316. EXPANDING WIRE FLUE BRUSH.

#### STEEL WIRE TUBE CLEANERS.-L-314 and L-316.

SIZE INCHES	1	1‡	1½	13	2	21/4	2 ½	23	3	3}	31	37	4
L-314. TINNED EACH		1.45	$\frac{1.55}{2.00}$	1.70 2.00	1.90	2.10 2.25	2.30 2.50	2.50 2.75	2.80 3.00	3.00	3.30	3.75	3.75 4.00



L-320. BUFFALO FORGE, NO. 4.



L-322. BUFFALO FORGE. NO. 5.

#### BUFFALO FORGES.

NUMBER, DESCRIPTION	Half Open Hood	Closed Hood.	With Dash.	finif Open Hood	With Dash.	Closed Hood	Low Down.	Low Bown.
WEIGHT POUNDS	150 40.00	155 42.00	$\frac{148}{36.00}$	27.00	70 24.00	80 30.00	40 16.00	50 18.00



L-330. GASOLINE TORCH.



L-332. NEEDLE FLAME TORCH



L-334. ALCOHOL TORCH

#### GASOLINE AND ALCOHOL TORCHES.

L-330. ST	TANDARD BLOW PIPE OR TORCH	5.00
	EEDLE FLAME TORCH (WILL GENERATE 3,500 DEGREES OF HEAT, WHICH IS 50 PER CENT. MORE THAN ANY OTHER TORCH CAN PRODUCE)	10.00
L-334. CO	OMBINATION SOLDERING TORCH FOR ALCOHOL	3.00

Descriptive circular of L-332 and L-334 sent upon application.

#### PARTS FOR GASOLINE TORCH.-L-330.

BURNERS, COMPLETE EACH		BURNER HEADS EACH	
AIR PUMPS EACH	1.25	DRIP CUPS EACH	.25
BURNERS WITHOUT HEAD EACH	1.25	NEEDLE SCREWS EACH	.40
AIR VALVES EACH	.75	FILLER PLUGS EACH	.20



L-338, NO. 3.



L-339. NO. 4.



L-340, NO. 5.

#### GEM GASOLINE FURNACES.

NUMBER	3	4	5	6	7	8
EACH	7.00	7.00	7.00	7.50	7.00	8.00

By removing top cover, metal pots can be used.

Descriptive catalogue sent upon application.

Soldering irons, tinners' snips, etc., see pages 248 and 249.







PLUMBERS' FURNACES.



L-353. OLD STYLE.

L-350. JEWEL					
L-353. OLD STYLE			 	 EACH	6.00

#### THAWING STEAMERS.-L-352. TO GO INTO PLUMBERS FURNACE INSTEAD OF SOLDER POT.

5.00 .09 



L-354. SHIELD.



L-355. HOOD.



L-356. COIL CAGE.



L-357, TOP PLATE.





L-359. VALVE.



L-360, BURNER.



L-361. PLUG.



L-362. AIR VALVE



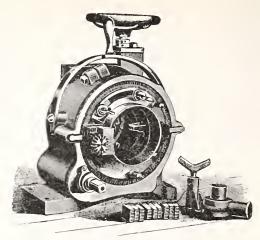
L-363. REGULATING LEVER.

L-364. NEEDLE FEED.

L-365. RUBBER BULB.

PARTS OF JEWEL GASOLINE FURNACE.

FIGURE	L-354	L-355	L-356	L-357	L-358	L-359	L-360	L-361	L-362	L-363	L-364	L-365
EACH	. 50	. 50	.50	1.00	.75	.75	.75	. 35	. 25	r35	. 35	.50



L-385. FORBES HAND MACHINE.

#### FORBES HAND MACHINES.

No		Range	Gross Weight. Pounds.	Price
*30	1 to	2 in., both Right and Left.	178	50.00
.35	∦ to	2 in. for Solid Dies (without)	170	45.00
*34	1 to		195	75.00
*36	2 to	3 in., R. H., 3 to 2 in. L. II.	200	85.00
*37	1 to	3 inches, R. and L.	200	105.00
†46	21 to	4 inches, R. H.	270	85.00
*38	1½ to	4 inches, R. H.	272	100 00
*40	11 to	4 inches, R. and L.	275	115.00
*42	1 to	4 inches, R. II.	273	110.00
*44	1 to	1 inches, R. and L.	285	130.00
150	4 to	6 inches, R. H.	376	115.00
†52	3½ to	6 inches, R. H	376	130.00
†54	21 to	5 inches, R. H.	378	150.00
<b>†</b> 56	21 to	6 inches, R. H.	381	175.00
†62	21 to	6 inches, R. II. (extra heavy)	885	300.00
*58	1 to	6 inches, R. II.	408	190.00
*60	1 to		426	235.00
*63	21 to	8 inches, R. and L.	750	360.00
†64	21 to		725	325.00
†66		10 inches, R. H.	880	500.00
*67		10 inches, R. II	890	500.00
*68	21 to	10 inches, R. and L.	950	550.00

<sup>\*</sup>Pressure feed machine. †Lead screw machine. Nos. 30 to 37 have no cut-off attachment.

#### FORBES HAND OR POWER MACHINES.

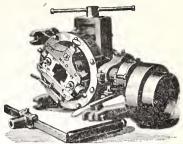
*70         \$\dagger{4}\$ to \$2\$ inches, R. and L.         430         100.00           *72         \$\dagger{4}\$ to \$2\$ in. for Solid Dies ("dies")         425         95.00           *73         \$1\$ to \$3\$ in. R. H., \$1\$ to \$2\$ in. L. H.         459         125.00           *76         \$2\$ to \$3\$ m. R. H., \$2\$ to \$2\$ in. L. H.         462         135.00           *77         \$\dagger{4}\$ to \$3\$ inches, R. and L.         467         135.00           *77         \$\dagger{4}\$ to \$4\$ inches, R. H.         652         140.00           *80         1\$\dagger{4}\$ to \$4\$ inches, R. H.         653         150.00           *82         1\$\dagger{4}\$ to \$4\$ inches, R. And L.         654         165.00           *84         1         04\$ inches, R. H.         653         160.00           *86         1         04\$ inches, R. And L.         664         180.00           *88         4         06\$ inches, R. H.         818         180.00           *99         2\$\dagger{4}\$ to 5\$ inches, R. H.         818         80.00           *94         2\$\dagger{4}\$ to 6\$ inches, R. H.         823         225.00           *98         1         to 6\$ inches, R. And L.         833         250.00           *99         2\$\dagger{4}\$ to 8\$ inches, R. An
*106 21 to 10 inches, R. and L. 1650 750.00

<sup>\*</sup>Pressure feed machine. †Lead screw machine.

These prices include counter-shaft, ratchet wrench and pipe rest. Nos. 70 to 77 have no cut-off attachment.



# ARMSTRONG PIPE THREADING MACHINES.



L-391. NO. O HAND OR POWER MACHINE.

NUMBER			0 00
L-390. HAND MACHINE ONLY. NO DIES			
L-390. HAND MACHINE, WITH PIPE DIES, 12 1 L-390. HAND MACHINE, WITH PIPE DIES, 1 1			
L-391. POWER MACHINE ONLY. NO DIES. N	O COUNTERSHAFT	,	65.00 130.00
L-391. POWER MACHINE, WITH PIPE DIES, 12			
L-391. POWER MACHINE, WITH PIPE DIES, 1	10 4, R. H	<u> </u>	130.00

No. 0 Machine uses Dies same as Armstrong Stock No. 2, sizes ‡ to 1-iuch inclusive, each \$1.50; and Stock No. 3, sizes 1‡ to 2-iuch inclusive, each \$4.00.

No. 00 Machine uses Dies same as Armstrong Stock No. 3, sizes 1 to 2-inch inclusive, each \$4.00; Stock No. 6,

sizes 2\frac{1}{4} and 3-inch Double-end Dies, per set \\$15.00; and a special Die, 3\frac{1}{4} and 4-inch, \\$15.00. Countershaft for No. 0 Machine, add to list \\$28.00; for No. 00 add to list \\$45.00.

Stands as shown in L-392, for No. 0 Machine, add to list \$10.00; for No. 00, add to list \$20.00.



L-392. NO. O HAND MACHINE ON STAND.

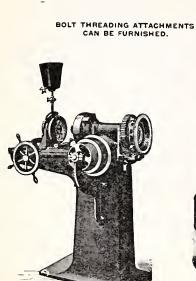


L-395. NO. 1 HAND MACHINE.

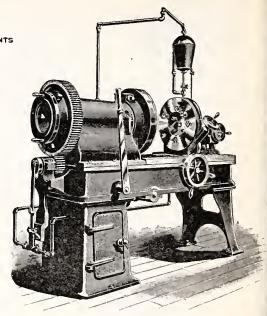
ARMSTRONG NO. 1 MACHINE, 1 TO 3-INCH.-L-395.

HAND MACHINE, WITH PIPE DIES, 1 TO 3-INCH, RI POWER MACHINE, WITH PIPE DIES, 1 TO 3-INCH,			

### JARECKI PIPE CUTTING AND THREADING MACHINES.



L-400. BACK VIEW, NO. 7.



L-402. FRONT VIEW, NOS. 9 AND 11.

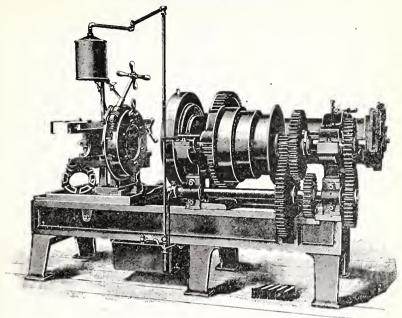
NUMBER OF MACHINE	6	7	7в	9	10	11	12
WITH ADJUSTABLE RIGHT HAND DIES	1 to 2	1 to 2	1 to 3	1 to 4	1 to 4	1½ to 6	1½ to 6
BELT POWER MACHINE, WITH COUNTERSHAFT		105.00		425.00		550.00	600.00
012 1 0 1111 1 1 1 1 1 1 1 1 1 1 1 1 1 1	15.00	15.00					
APPROXIMATE WEIGHT	$\frac{.50}{650}$	.50 , 875	.50 1325	.70 2500	.70 2500	2650	.90 2800

Prices on application for Machines entting 6 to 16 inches.

#### EXTRA DIES.

ONE SET CUTS THESE TWO SIZES	1 to §	1 to 3	1 to 11/4	1½ to 2	2½ to 3	3½ to 4	4½ to 5	6
FOR NUMBER 6 OR 7 MACHINE . PER SINGLE SET FOR NUMBER 7B MACHINE . PER SINGLE SET FOR NUMBER 9 OR 10 MACHINE . PER SINGLE SET FOR NUMBER 11 OR 12 MACHINE . PER SINGLE SET	2.50 3.50	2.50 3.50	2.50 3.50 4.00	2.50 3.50 4.00 4.50	3.50 4.00 4.50	4.00 4.50	4.50	4.50

#### PIPE THREADING MACHINERY.



L-406

# SAUNDERS' STANDARD PIPE CUTTING AND THREADING MACHINES. WITH ADJUSTABLE EXPANDING DIE-HEAD WITH INTERCHANGEABLE CHASERS, AUTOMATIC OIL PUMP AND COUNTERSHAFT, COMPLETE.

_										
	NUMBER	2	3	4	5	5 A	6	7	8	9
	CUTS AND THREADS PIPE INCHES	1 to 2 350.00	1 to 3 500.00	1 to 4 575.00	1} to 6 975.00	2½ to 6 925.00	2½ to 8 1075.00	2½ to 10 1700.00	4 to 12 2000.00	8 to 18 2400.00



L-408. IX L MACHINE.

#### IXL MACHINES. (SOLID DIES.)

CUTS AND THREADS PIPE	1 to 2
HAND MACHINE	 90.00
POWER AND HAND MACHINE	 110.00

#### NO. 4B MACHINES.

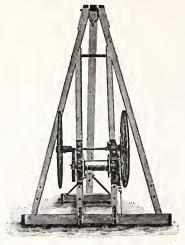
	·	
CUTS AND THREADS PIPE	. INCHES	½ to 4
HAND MACHINE		320.00
POWER AND HAND MACHINE		405.00

No. 4B has interchangeable dies.



L-410. NO. 4B MACHINE,

#### WATER WORKS TOOLS.



L-425.

The above illustration shows Derrick adopted by the Water Departments of Chicago and Milwankee. It is also used by many other cities and by gas companies for laying large mains. The bearings and gear are so nicely adjusted that a forty-eight-inch pipe or valve can be raised or lowered by a boy. This Derrick can be moved along a ditch or from one street to another with little effort, only requiring to be turned over on to the wheels and rolled like a cart. This is a very great improvement over other styles, which are cumbersome and difficult to transport.

The wheels are of carriage pattern, especially constructed for this purpose. Timbers are of best quality Norway pine, free from all knots, cheeks, etc., well seasoned and perfectly dry. The pinion and drnm shafts are of cold rolled steel, and gearing of east steel.

#### DERRICKS.-L-425.

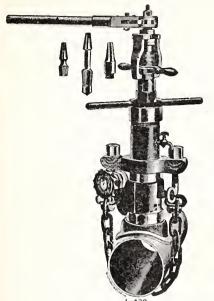
NUMBER	1	2	3
FOR LAYING PIPE OR VALVES INCHES PRICE	12 to 30 150,00	36 175.00	48 to 60 225.00

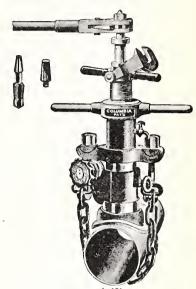
Blocks and rope not included in the above list. We build these Derricks to order on short notice.

#### ENDLESS ROPE SLINGS.

SIZE PIPE INCHES	4	6	8	10	12	14	16	20	24	30	36
1-INCH ROPE . EACH 115-INCH ROPE . EACH 2-INCH ROPE . EACH	1.50	1.50	1.75	2.00	2.25	2.50	2.75	3.50	4.00	5.00	6.00

#### WATER WORKS TOOLS.





L-430.
MUELLER PATTERN WATER TAPPING MACHINE.

L-431.
COLUMBIA WATER TAPPING MACHINE.

## MUELLER PATTERN WATER TAPPING MACHINES.-L-430. FOR DRILLING AND TAPPING MAINS UNDER PRESSURE.

PRICE	100.00

Water Tapping Machine complete includes: one each, Combined Drill and Tap—1, \$, 3, 1 inch; one each, Screw or Hexagon Plug—1, \$, 3, 1 inch; four Malleable Iron Saddles, any size; one Chain for any size Pipe.

In case all the Tools and Saddles are not required, or more Saddles are needed, deduct or add, whichever the case may be, according to price list of extras shown on page 238.

#### COLUMBIA WATER TAPPING MACHINES,-L-431.

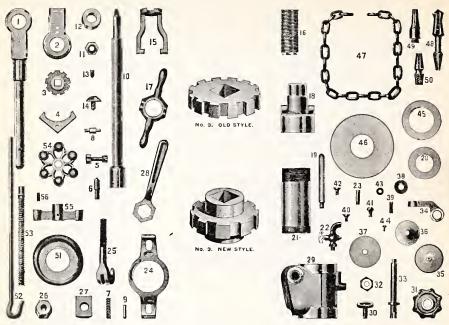
NUMBER	1	2
PRICE	100.00	150.00

No. 1 Columbia Water Tapping Machine complete includes: one each, Combined Drill and Tap—1, 2, 2, 1 inch; one each, Serew or Hexagon Plug—1, 2, 3, 1 inch; four Malleable Iron Saddles, any size; one Chain for any size Pipe.

If all the Tools and Saddles are not required, or more Tools and Saddles are needed, deduct or add, whichever the case may be, according to price list of extras.

No. 2 Columbia Machine includes the following: one each, Combined Drill and Tap—1, 1\frac{1}{4}, 1\frac{1}{2}, 2 inch; one each, Screw or Hexagon Plug—1, 1\frac{1}{4}, 1\frac{1}{2}, 2 inch; four Malleable Iron Saddles, any size; one Chain for any size Pipe.

The No. 2 Machine will tap all the small sizes, by getting the Combined Drills and Taps and Plugs.



PARTS OF MUELLER WATER TAPPING MACHINE.



#### OUR SPECIAL DRY PIPE AND GAS MAIN TAPPING MACHINE

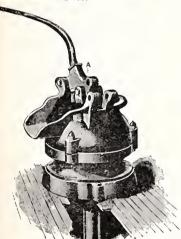
L-435. COMPLETE, LESS RATCHET, DRILLS, AND TAPS	9.00
RATCHET HANDLE, COMPLETE	8.25

#### COMBINED TAP AND DRILLS FOR DRY MACHINE.

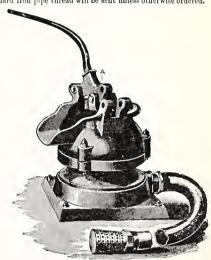
SIZE INCHES	â	1/2	\$ 3	1	11	11/2	2	2 ≟
IRON PIPE THREAD . EACH CORP. COCK THREAD, EACH								

"Our Special" Dry Pipe and Gas Main Tapping Machine is a substitute for the Old Style Crow Hook for drilling and tapping of any kind. It is much superior to the Crow, and cheaper, as it performs the same work that would require three or more wrought-iron Crow Hooks. With this machine any size pipe can be tapped, depending on the length of chain.

Machine and Ratchet, boxed, without Drills and Taps, weighs 54 pounds. In ordering a Machine, state sizes of Tools desired and size of the largest main to be tapped. If not specified, chain for a 12-inch pipe will be sent. Tools with Standard iron pipe thread will be sent unless otherwise ordered.



L-440. BOTTOM SUCTION.



L-441. SIDE SUCTION.

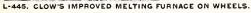
#### DIAPHRAGM TRENCH PUMPS .- L-440 and L-441.

NUMBER		2
SIZE OF SUCTION	21	3
CAPACITY	3	11
L-440	22.00	24.00
L-441		30.00

Price, 12 feet of 3-inch Spiral Flat-wired Suction Hose (specially made for this purpose), fitted with Brass Strainer, Hose, Nipple, and Couplings, complete, \$35.00; extra Diaphragms, net, \$3.00.

#### WATER WORKS TOOLS.







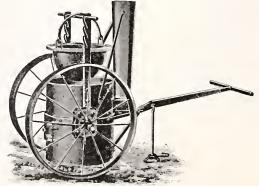
L-448. CLOW'S IMPROVED MELTING FURNACE ON LEGS.

#### CLOW'S IMPROVED MELTING FURNACES.-L-445 and L-448.

NUMBER	1	2
ON LEGS	35.00 50.00	30.00 45.00
ON WHEELS, WITH GASOLINE BURNER AND RESERVOIR ATTACHMENT	75.00	70.00

The No. 1 Furnaces are the standard size, and can be used on the largest work, while the No. 2 are designed for lighter service.



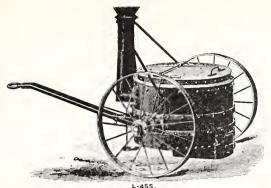




L-450.

#### WASHINGTON IMPROVED MELTING FURNACES.

1	NUMBER 1	52.00
- 1		



TAR MELTING FURNACES.-L-455.

PRICE, COMPLETE	 	 125.00

Designed to meet the requirements for a thoroughly reliable Tar Melting Furnace. Like our Lead Melting Furnaces, it is constructed of the best material, and gives excellent satisfaction.

Send for Catalogue of Melting Furnaces.



L-457. STEAM JACKET KETTLE.



L-459, CALORON KETTLE.

#### STEAM JACKET KETTLES .- L-457.

CAPACITY         GALLON           DIAMETER         INCHE           DEPTH         INCHE           PRICE         EAC	14 10	10 18 12 28.00	15 21 14 32.00	20 22 15 40.00	25 24 16 50.00	33 28 16 60.00	40 29 17 65 00	58 32 21 85.00	90 38 22 110.00
--------------------------------------------------------------------------------------------------------------------	----------	-------------------------	-------------------------	-------------------------	-------------------------	-------------------------	-------------------------	-------------------------	--------------------------

These Kettles are made of very thick metal, put together without stay-bolts, have ample steam space, are packed with asbestos sheet packing, tapped for inlet and drip pipes, and unless ordered for higher pressure are tested to 75 pounds bydraulic pressure to the square inch, and are guaranteed perfect and safe for the pressure named.

#### CALDRON KETTLES.-L-459.

CAPACITY GALLONS DIAM. OUTSIDE OF FLANGE . INCHES	25 28	33 31	41 34	48 35	53 36	65 39	75 41	90 43	110 46	170 61	230 62½
DIAM. INSIDE OF FLANGE INCHES	24	28	30	31	32	34	36	38	42	54	58
DEPTH INCHES	16	16	19	19	20	20½	22	22	23	24	31
PRICE EACH	6.00,	8.00	10.00	12.00	13.00	14.00	18.00	25.00	30.00	50.00	70.00

All sizes above 75 gallons are east without lugs on rim unless specially ordered.

Any of the above Kettles may be tapped for outlet pipes at an extra charge of \$2.50 net.

We can make any of our Kettles of any desired thickness of metal on short notice.





L-467. POURING POT

L-465. STEEL LADLE.

STEEL LADLES .- L-465.

SIZE	CHES 8	10	12
EACH	5.00	6.50	7.50

#### POURING POTS.-L-467.

#### HANDLES FOR POURING POTS.

ACH	2.50	EACH	30



L-469. STEEL TAMPER FOR TAMPING UNDER PIPE.



L-471. ROUND TAMPER, IRON HANDLE.



L-473. SQUARE TAMPER IRON HANDLE.



L-475. ROUND-HEAD CROWBAR.

#### TAMPERS AND CROWBARS.

FI	GURE									. ,	 -	-			-	-			L-4	69	L-471	L-473	L-475
E	CH.				-														3.5	i0	2.50	2.50	4.00





YARNING IRONS.-L-481.

L-483. CALKING IRON.

-							_	 	_	_	 		-	 	-		_	_	_			
NU	MBER 1.	14-INCH	THICK AT	POINT .		-		 -			 -		-	 -	-	~ ~	-		-	_ EACH	.75	
NU	MBER 2.	1,8-INCH	THICK AT	POINT	- ,-	-		 -		-	 -	•	-	 τ	-		-		۸	_ EACH	.80	

#### \*CALKING IRONS.-L-483.

NUMBER	1	2	3	4	5	6	7	8
SIZE	.60	.60	.60	.65	.65	.70	.70	.75



## COLD CHISELS.-L-485.

NUMBER	1	2	3	4	5	6
SIZE INCHES	.50	.50	.55	.60	.65	.70



L-487. PIPE-CUTTING CHISEL



L-488. DIAMONO CHISEL, TRIANGULAR POINT.

L-489. DIAMOND CHISEL



L-490. GIAMONO CHISEL, HALF-ROUNG,



L-491. BRICK CHISEL, 18 INCHES LONG.





L-492, WALL CHISEL, 30 INCHES LONG.



L-493. WALL CHISEL, 30 INCHES LONG, DIAMONO POINT.

#### CHISELS.

FIGURE	L-487	L-488	L-489	L-490	L-491	L-492	L-493
EACH	1.25	.75	.75	.60	1.75	3.00	3.00

Our Water Works Tools are hand-made, from the highest grade steel. Each tool is stamped with our name, and warranted. \*Right or Left Hand Calking Irons for close work made to order,



#### PATENT PIPE JOINTERS.-L-500.

17															
	SIZE INCHES	2	3	4	6	8	10	12	16	20	24	30	36	42	48
	EACH	3.00	4.00	4.50	6.00	7.50	10.00	11.00	14.00	17.50	21.00	22.50	24.00	28.00	30.00

This Pipe Jointer is the invention of a practical pipe layer, and is designed to take the place of Clay Rolls, Clayed Rope and other devices, for retaining melted lead in Pipe Joints until it hardens.



L-503, IMPROVED CALKING IRON.



L-506. STEEL WEDGES.

#### CLOW IMPROVED CALKING IRONS.-L-503.

MADE IN FIVE SIZES	i, 36-1/2-56-3's-76	 	EACH	1.50

#### STEEL WEDGES.-L-506.

- 1						
	NUMBER 1. 1% INCHES SQUARE EACH	2.00	NUMBER 2.	2 INCHES SQUARE .	EACH	4.00



L-509. PICK.

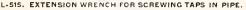


L-512. STEEL BRANDING STAMP.

PICKSL-5	09.					
WEIGHT	4	5	6	7	8	9
L-509. PER DOZEN	11.00	12.00	13.00	14.00	16.00	18.00

L-512. Price according to number of letters, from \$3.00 to \$4.00 each.







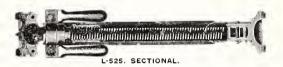
L-518. IRON SPIRIT LEVEL.

#### EXTENSION WRENCHES AND IRON SPIRIT LEVELS.

- [				
1	L-515	. EACH	9.00	L-518 EACH 3.50



L-525. EXTENSION TRENCH BRACE, CLOSED.



#### EXTENSION TRENCHING BRACES .- L-525.

LENGTH, CLOSED INCHES	18	24	30	36	48	60	72
LENGTH, EXTENDED INCHES	28	34	42	48	60	72	84
STANDARD STRENGTH PER DDZEN	21.00	22.00	23.50	26.50	28.50	31.00	32.00
EXTRA HEAVY STRENGTH PER DDZEN				29.00.	32.50	36.00	39.00
				1			

These Braces are not only safer than the ordinary Brace, but can be more quickly put into place without any jarring of the banks. They can be tightened or loosened at any time, thus allowing the sheeting to be driven with ease and safety.

Contractors by purchasing longer barrels can provide themselves with Braces that will work in any width of trench.

#### WESTON'S DIFFERENTIAL BLOCKS.-L-527.

CAPACITY TDNS	18	1	- ±	1	11	2	3
REGULAR HOIST FEET	5	6	7	8	81	9	94
WEIGHT POUNDS	11	22	30	51	81	122	173
EACH	10.00	13.00	1á,00	20.00	25.00	30.00	40.00
EXTRA HOIST _ PER FDDT	1.40	1.44	1.52	1.60	1.68	1.76	1.92

#### BELL BOTTOM JACK SCREWS.-L-529.

LENGTH OF BASE, INCHES	5	6	8	10	12	14	16	18	20	24
DIAM. SCREW, 11/2 INCHES	3.50	3.75	4.25	4.75	5.25	6.00	6.75			
DIAM. SCREW, 134 INCHES		4.50	5.00	5.75	6.25	6.75	7.50	8.50		
DIAM. SCREW, 2 INCHES		5.25	6.00	6.75	7.50	8.25	9.25	10.25	11.50	13.50
DIAM. SCREW, 214 INCHES			7.50	8.25	9.00	10.00	11.00	12.00	13.25	15.7
DIAM. SCREW, 214 INCHES			8.75	9.75	10.75	12.00	13.25	14.50	15.75	18.2





L-529. BELL BOTTOM JACK SCREW.





L-533. STEEL TRAY DIRT BARROW.

BARROWS.

FICURE	 I-533 L-535
EACH	 4.50 2.00



L-537. TUBULAR STEEL BARROW.

#### STEEL BARROWS.-L-537.



COAL BARROW, CAPACITY 250 POUNDS COAL	14.25
COAL BARROW, CAPACITY 425 POUNDS COAL	20.00
COKE BARROW, CAPACITY 5 BUSHELS	18.50

#### LAMPS.-L-539.

FIGURE			 L-539
WITH PLAIN CLASS CLOBE WITH RUBY RED CLASS GLOBE		 	9.00 12.00



L-542. SQUARE-POINT RAILROAD SHOVEL.

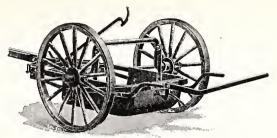


L-544. ROUND-POINT DITCH SHOVEL.



L-546. ROUND-POINT LONG HANDLE DITCH SHOVEL. SHOVELS.

FIGURE		L-542 L-544	L-546
	PER OOZEN	10.25 11.00 10.50 11.25	10.25 11.00



L-551. WHEEL SCRAPER.

#### IMPROVED STEEL BOWL WHEEL SCRAPERS.

NUMBER		2	3
	 CUBIC FEET	13 50.00	17 55.00

The hest, strongest and easiest working Wheel Scraper ever put on the market. The howl is stamped from one solid plate of wrought steel, 1/3 of an inch thick, without joint, seam or rivet.



L-553. NOS. 1 AND 2 SCRAPER.

L-554. NO. 3 DITCHING SCRAPER.

#### COLUMBUS SOLID STEEL SCRAPERS.

NUMBER	 1	2	3
CAPACITY	7 8.00	5 7.75	3 7.50

No. 1.—Used for long haul or down grade. No. 2.—For all ordinary grading, road or township work.

No. 3.—This Improved Ditching Scraper is made with extra long nose, and the cutting edge is well sharpened, so that it enters the ground as readily as a plow, and it will work well in any kind of soil, whether plowed or not. It is a great favorite with highway commissioners and township trustees, as it is easy on horses, and can be used for general light road work, as well as for ditching purposes, and has greater capacity than any other one-horse Scraper in the market.



#### STEEL TOTE BOX.

Suitable for handling botts, tools, nails, nuts, washers, small eastings, ore, quartz, and other rough or heavy substances. Size, 164 inches long, 94 inches wide, 44 inches deep; No. 16-gauge steel. The upper edges of the sides are lapped 4-inch, stiffening and strengthening the hox and giving it a smooth finish. Handle riveted on each end, of same gauge steel as box. Weight of hox, complete, only 8 pounds.

PRICE	. EACH	1.25
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#### PLUMBERS' AND MISCELLANEOUS TOOLS.

L-600. SHAVE HOOK, WITH	L-616. SPRING YARNING IRON.	L-640. IRON POCKET SPIRIT
L-601, TRIANGULAR SHAVE HOOK.	L-618. BENDING PIN. Medium each .20	Each
L-602. OVAL SHAVE HOOK.	L-620 ROUND IRON. Number 1 2 3	Flat each .25 .35 .45  L-644. RASP.  Size inches 10 12 14
L-605. COLD CHISEL.	Each	Each
L-606. CALKING CHISEL.	L-625 IMPROVED HACK SAW. Size inches 8 10 12	L-648. BASIN WRENCH.
L-607. RIGHT OR LEFT HAND CALKING CHISEL.	Each	Each
L-608. STUB CALKING CHISEL.	Size inches 12 14 16 Single Edge cach .60 .75 .85 Double Edge cach .75 .85 .95  L-631. SCREW-DRIVER.	L-652. TINNERS' SNIPS,
L-611, TAP BORER	Size . inches 6 7 8 10 12 Each	Each 1.25 4.40 1.60
Each		Oue Inch each .45
Size Inches 8 10 12 Per dozen	Two Foot each .25	

#### PLUMBERS' AND MISCELLANEOUS TOOLS.

L-660. CHIPPING KNIFE. Size inches 41 5 Each	L-674. DRIFT PLUG. 1, 1\frac{1}{4}, 1\frac{1}{2} \text{ or 2 inch } \cdots \text{ each } \cdot 15	L-688. FLAT SOIL BRUSH.
L-662. DUSTER.	L-676. BOSSING STICK.	L-690. HATCHET COPPER BOLT. Weight, lbs 2 2½ 3 4 Per pound
L-664. BOXWOOD DRESSER. Each	L-678. BLOWPIPE. Each	L-692. POINTED COPPER BOLT. Weight, lbs. ½ ¾ 1 1½ 2 2½ 3 Per pound
Each	L-680. GREASE BOX. Each 1.25	Size . 2½ 3 3½ 4 5 6 Each25 .30 .40 .45 .55 .75
Number	L-692. SOIL CUP.	L-696, WIPING CLOTH. Moleskin each .15
	A	
L-670. TWO FOOT IRON SQUARE.	L-684. COMPASS.	L-698. CANDLESTICK.
L-672. CALIPERS. Size, inches 2½ 3 4 5 6 Each		L-700. TORCH. Tin each 1.00 Brass each 1.25



 Single
 each 1 75
 Single
 each 1.85

 Double
 each 2.25
 Double
 each 2.50

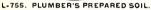
HALF-ROUND BAR.

Each . . . . . . . . . . . . . 1.50



L-750. SEWER ROD. SEWER RODS.-L-750.





L-757. PUTTY

#### PLUMBER'S SOIL, AND PUTTY.

L-755.	PINT CANS         £ACH           QUART CANS         £ACH           BLADDERS, 10 TO 20 POUNDS         PER POUND	.25
L-755.	QUART CANS	.45
L-757.	BLADDERS, 10 TO 20 POUNDS	.04



L-759. GAS FITTER'S CEMENT.



1-762 GUMBO CEMENT.

#### GAS FITTER'S CEMENT.- L-759.

GUMBO CEME	NTL-	762.				
PACKAGES POUNDS	2	4	8	25	50	100
EACH	.25	.50	1.00	2.50	4.75	9.25



L-770. NAME PLATE.



NAME PLATES.

L-770. GERMAN SILVER         PER DOZEN         3.75           L-770. CAST BRASS, SPECIAL         PER DOZEN			 		
L-772. GERMAN SILVER, DIAMETER 11/2 INCHES	L-770.	GERMAN SILVER	 	PER DOZEN	3.75
L-772. GERMAN SILVER, DIAMETER 11/2 INCHES	L-770.	CAST BRASS, SPECIAL	 	PER DOZEN	
	L-772.	GERMAN SILVER, DIAMETER 11/2 INCHES	 	PER DOZEN	3.00

We make a large variety of Name Plates, both in Brass and German Silver. Special designs made to order.

# FOUNTAINS.



Included in this denartment are Fountains, Drinking Fountains, Aquariums, Flower Vases, Statuary, Iron Lawn Furniture, etc.

Special Catalogue with prices furnished on application.

# PLUMBING.

MADDEN'S PATENTA

Our Siphon Jets have stood every test of the sanitary expert, and have met satisfactorily the still more severe test of long usage by the public in general, winning for themselves the high reputation long since accorded them.

Durable in every part, constructed of the best materials by the most skillful workmen, these closets combine perfect action and safety with artistic design.

The seat attachment is not only sanitary, but of great strength. The rubber cushion inserted in the earthenware bears all strain, absolutely preventing breakage of bowl.



SECTIONAL

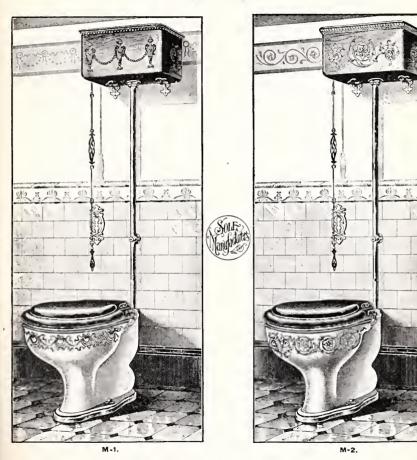
The deep water seal is a positive barrier to sewer gas. The siphonic action, aided by a strong jet, insures thorough cleansing of bowl and trap.

The tanks for operating these closets are simple in construction and perfect in action. An automatic device so controls the water released at each flush that waste of water is prevented and a succession of flushes can be obtained—a feature of inestimable value where the supply is intermittent, the pressure light, or water economy an object.

On pages 271 and 276 we illustrate these closets in iron, enameled, which we recommend for use in public buildings, schools, hospitals, factories, etc. Furnished with the automatic closed tank, as illustrated on page 276, they at once become the most durable closets and the most economical water users of any on the market.

In the selection of sanitary apparatus it is a question of operating principle, hygienic and sanitary security, and economy. We ask you to investigate our claims.

(MADDEN'S PATENT)

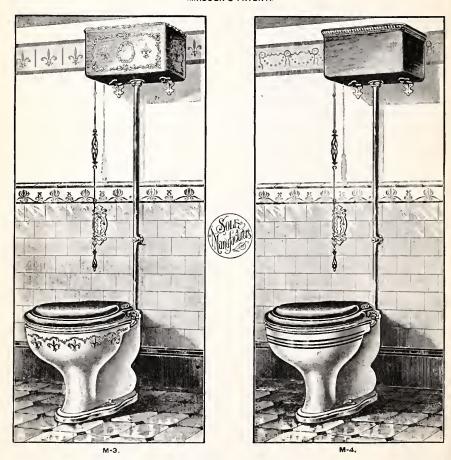


COLONIAL.—Concealed Siphon Jet, embossed, with Gold Tracing or tinted Pale Green or Shell Pink, San Domingo Mahogany Seat and Cover, No. 3 Embossed Tank, White Enameled or Mahogany, Nickel Silver Trimmings, Cut Glass Pull and Brass Floor Flange \$90.00

RENAISSANCE.—Concealed Siphon Jet, embossed, tinted Pink with Gold Tracing, San Domingo Mahogany Seat and Cover, No. 1 Embossed Tank, White Enameled or Mahogany, Nickel Silver Trimmings, Cnt Glass Pull and Brass Floor Flange,

Mahogany Seats and White Enameled Tanks afford a pleasing contrast and make an artistic combination. We do not recommend White Enamel for Seats, as it is not at all serviceable.

MADDEN'S PATENTA

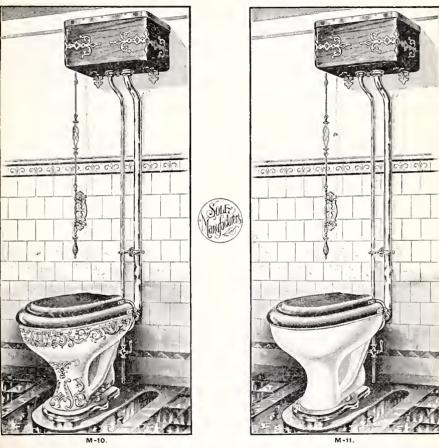


Rococo.—Concealed Siphon Jet, embossed, with Gold Tracing or tinted Shell Pink or Pale Blue, San Domingo Mahogany Seat and Cover, No. 3 Embossed Tank, White Enameled or Mahogany, Nickel Silver Trimmings, Cut Glass Pull and Brass Floor Flange . \$85.00

ORNAMENTAL.—Concealed Siphon Jet, Gold Lines, San Domingo Mahogany Seat and Cover, No. 3 Tank, White Enameled or Mahogany, Nickel Silver Trimmings, Cut Glass Pull and Brass Floor Flange, \$75.00

Mahogany Seats and White Enameled Tanks afford a pleasing contrast and make an artistic combination. We do not recommend White Enamel for Seats, as it is not at all serviceable,

MADDEN'S PATENT.



Includes Square-hack Siphon Jet Closet with Seat and Lid Hinged to Bowl, Round Cornered Tank, 23x12x15 inches, with Nickel Plated Tank Ornaments, Nickel Plated Supports, Flush and Supply Pipes, Guide, Rod and Cut Glass Pull, Pipe Holders with Buffer, Brass Floor Flange, Bolts and Rubher Gasket.

M-10. Embossed Closet, complete as described, \$70.00
M-11. Plain Closet, complete as described. 69.00

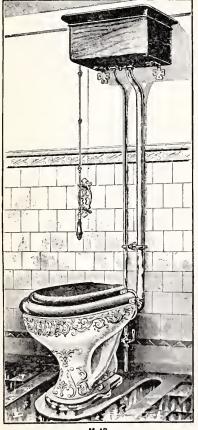
Tanks for operating the above Jet Closets contain sufficient water for three successive flushes

Tanks and Seats of Quartered Oak and Cherry carried in stock. Sycamore, Walnut, White or Bird's-eye Maple, Red or White Mahogany, extra, \$4.00.

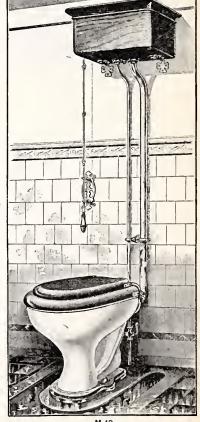
Italian Marble Floor Slab, 26 x 26 inches, 14 inches thick, countersunk to fit closet, as shown, add \$8.00

For roughing-in allow 13 inches from wall to center of outlet.

(MADDEN'S PATENT)







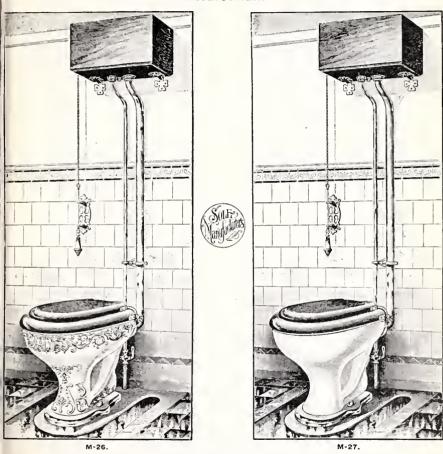
Includes Square-back Siphon Jet Closet with Seat and Lid Hinged to Bowl, Round Cornered Tank 23 x 12 x 15 inches, with Nickel Plated Brass Supports, Flush and Supply Pipes, Guide, Rod and China Pull, Pipe Holders with Buffer,

Brass Floor Flange, Bolts and Rubber Gasket,

Embossed Closet, complete as described, . . \$60.00 59.00 M-19. Plain Closet, complete as described,

Tanks for operating the above Jet Closets contain sufficient water for three successive flushes. Tanks and Seats of Quartered Oak and Cherry carried in Stock. Sycamore, Walnut, White or Bird seye Maple, Red or White Mahogany, extra, \$4.00. Italian Marble Floor Slab, 26 x 26 inches, 11 inches thick, countersunk to fit closet, as shown, add \$8.00. For roughing in allow 13 lnches from wall to center of outlet.

MADDEN'S PATENTA



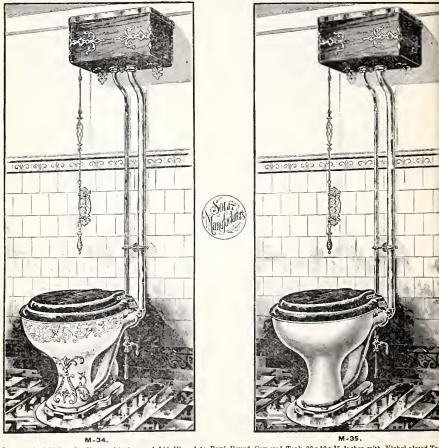
Includes Square-back Siphon Jet Closet with Scat and Lid Hinged to Bowl, Plain Tank, 23 x 12 x 15 inches, with Nickel Plated Brass Supports, Flush and Supply Pipes, Guide, Chain and China Pull Pipe Holders with Buffer, Brass Floor Flange, Bolts and Rubber Gasket

Tanks for operating the above Jet Closets contain sufficient water for three successive flushes.

Italian Marble Floor Slab, 26 x 26 inches, 1½ inches thick, countersunk to fit closet, as shown, add \$3.00.

For roughing in allow 13 inches from wall to center of outlet.

(MADDEN'S PATENT.)



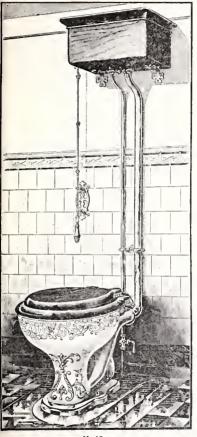
Includes Oval Siphon Jet Closet, with Seat and Lid Hinged to Bowl, Round Cornered Tank 28 x 12 x 15 inches, with Nickel-plated Tank Ornaments, Nickel-plated Supports, Flush and Supply Pipes, Guide, Rod and Ctu Glass Pull, Pipe Holders with Buffer, Brass Floor Flange, Bolts and Rubber Gasket.

All Tanks for operating our Jet Closets contain sufficient water for three successive flushes.

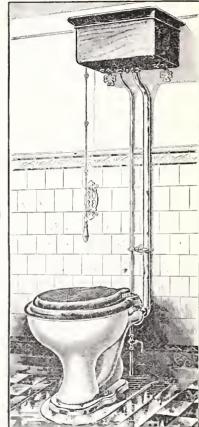
Quartered Oak and Cherry Tanks and Seats carried to stock. Sycamore, Walnut or Ash furnished to order without extra cost. White or Bird's-eye Maple, Red or White Mahogany, extra, \$4.00.

Italian Marble Floor Slab, 26 x 26 inches, 1½ loches thick, countersunk to fit closet, as shown, add \$8.00.
For roughing in allow 13 inches from wall to center of outlet.

(MADDEN'S PATENT.)







M-42.

M-43.

Includes Oval Siphon Jet Closet, with Seat Hinged to Bowl, Round Cornered Tank 23 x 12 x 15 inches, with Nickel-plated Brass Supports, Flush and Supply Pipes, Guide, Rod and China Pull, Pipe Holders with Buffers, Brass Floor Flange, Bolts and Rubber Gasket. \*

Embossed Closet, complete as described \$55.00 M-43. Plain Closet, complete as described . . . 54.00

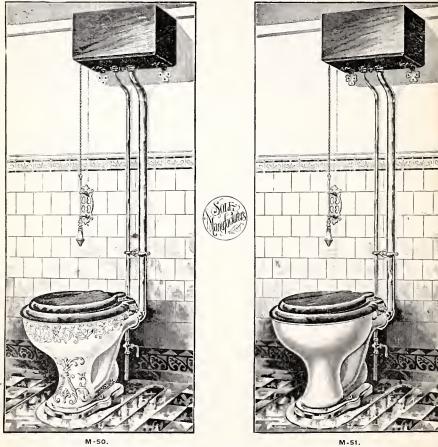
All Tanks for operating our Jet Closets contain sufficient water for three successive flushes.

Quartered Cak and Cherry Tanks and Seats carried in stock. Sycamore, Walnut or Ash furnished to order without extra cost. White or Bird's-eye Maple, Red or White Mahogany, extra, \$4.00.

Italian Marble Floor Slab, 26 x 26 Inches, 11/4 inches thick, countersunk to fit closet, as shown, add \$8.00.

For roughling in allow 13 inches from wall to center of outlet.

(MADDEN'S PATENT.)



Includes Oval Siphon Jet Closet, with Seat and Lid Hinged to Bawl, Plain Tank 23 x 12 x 15 inches, with Nickel-plated Brass Supports, Flush and Supply Pipes, Guide, Chain and China Pull, Pipo Holders with Buffers, Brass Floor Flunge, Bolts and Rubber Gasket.

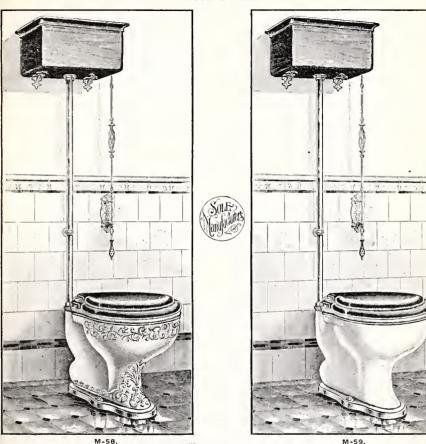
M-50. Embossed Closet, complete as described \$50.00
M-51. Plain Closet, complete as described \$49.00

All Tanks for operating our Jet Closets contain sufficient water for three successive flushes.

Italian Marble Floor Slah, 26 x 26 inches, 1¼ inches thick, countersunk to fit closet, as sbown, add \$8.00.

For roughing in allow 13 inches from wall to center of outlet.

(MADDEN'S PATENT.)



Includes Oval Siphon Jet Closet with concealed Jet Pipe, Seat hinged to Bow!, No. 2 Round Cornered Tank 23x12x15 inches, Nickel Plated Brass
Tank Supports, Flush Pipe with Protector, Wall Guide, Link Rods with Cut Glass Pull. Brass Floor Flance, Bolts and Rubber Gasket.

		 	 	 	 ,		 	0 0000	 	
M-58.	Embossed Closet, complete as described,				_			,		\$52.50
	Plain Closet, complete as described,									51.50
If with	Decorated Bowl, add				-	_				10.00

Tanks for operating above Closets contain sufficient water for three successive flushes

Tanks and Seats of Quartered Oak and Cherry carried in stock. Sycamore, Walnut, White or Bird's eye Maple,

Red or White Mahogany, extra, \$4.00.

For roughing in, allow 111 inches from wall to center of outlet

# THE "BUENA" SIPHON JET.

(MADDEN'S PATENT.)







The "Buena" Siphon Jet Closet with Viritled Porcelain Oval Bowl, Seat and Lid hinged to Bowl, No. 3 Round Cornered Tank, Nickel Plated Tank Supports, Flush Pipe and Slip Joint, Pipe Holder with Buffer, Pull and Chain, Brass Floor Flange, Bolts and Rubber Gasket.

M-66. Embossed Closet, complete as described, M-67. Plain Closet, complete as described,

\$33.00 32.00

If with N. P. Supply Pipe and Stop Cock, add \$2.75.

If willout N. P. Flush Pipe, deduct \$2.25.

Tanks and Scats of Quartered Oak and Cherry carried is stock. Sycamore, Walnut, White or Bird's eye Maple,
Red or White Mahogany, extra, \$4.00.

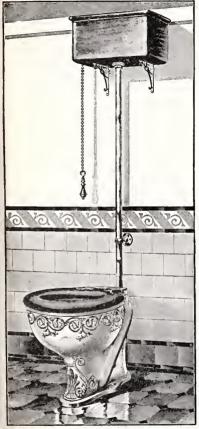
Italian Marble Floor Slab, 26 x 26 inches, 14 inches thick, countersunk to fit closet, as shown, add \$8.00.

The Tank furnished with the "Buene" Closet contains sufficient water for two successive flushes.

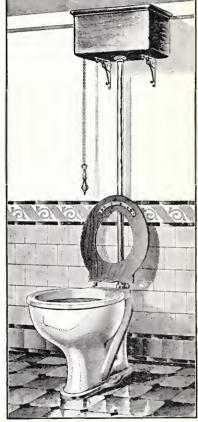
For roughing in allow \$94 inches from wall to center of outliet.

# THE "BUENA" SIPHON JET.

#### (MADDEN'S PATENT.)







M-74

M-75

The "Buena" Siphon Jet Closet with Vitrified Porcelain Oval Bowl, 1½ inch reinforced Oak Seat hinged to Bowl, No. 3 Round Cornered Oak Tank, Galvanized Iron Tank Brackets, Nickel Plated Flue Fipe, Pipe Holder with Buffer, Pull and Chain, Brass Floor Flange, Bitsaah Rubber Gasket

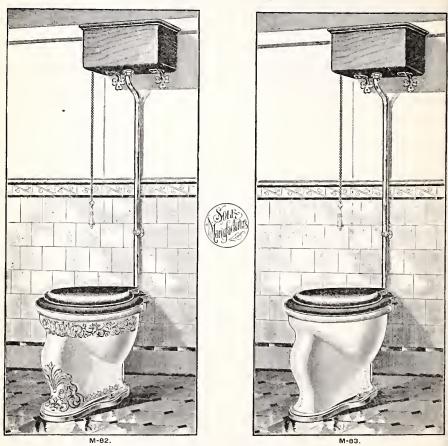
M-74.	Embossed Closet, complete as described,						_					\$33.00
M-75.	Plain Closet, complete as described,	-		-				-				32.00
If with	Nickel Plated Supply Pipe and Stop Cock, add	i										2.75
If with	out Nickel Plated Flush Pine, deduct											2.25

The Tank furnished with the "Buena" Closet contains sufficient water for two successive flushes.

For roughing in, allow 91 inches from wall to center of outlet.

# CLOW'S WASH-DOWN JET ACTION CLOSET.

(MADDEN'S PATENT)



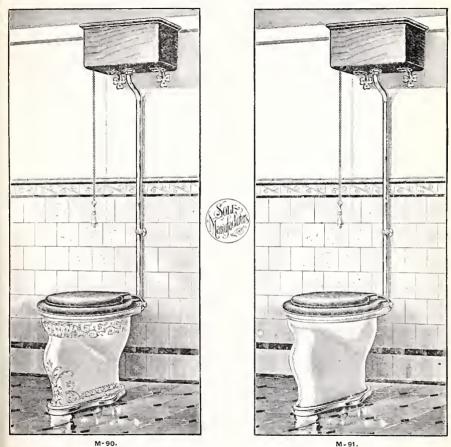
Includes Porcelain Wash-Down Bowl with Jet Action, Seat and Lid Hinged to Bowl, No 3 Cherry or Oak Round Cornered Tank, Nickel Plated Brass Tank Supports, Flush Pipe, Pull and Chain, Pipe Holder with Buffer, Brass Floor Flange, Bolts and Rubber Gasket

 M.82. Embossed Closet, complete as described.
 \$28.00

 M.83. Plain Closet, complete as described.
 27.00

#### CLOW'S DEEP SEAL SIPHON HOPPER CLOSET.

MADDEN'S PATENT

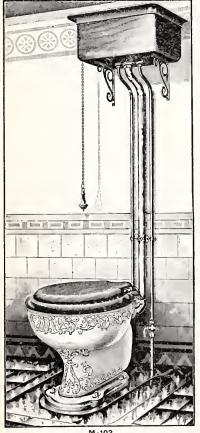


lactudes Oval Deep Seal Siphon Hopper with Seat and Lid Hinged to Bowl, Cherry or Oak Round Cornered Single Discharge Siphon Tank,
Nickel Plated Brass Supports, Flush Pipe, Pull and Chain, Pipe Holder with Buffer,
Brass Floor Flange, Bolts and Rubber Gasket.

M-90.	Embossed Closet, complete as described,				-				\$22 00	
M-91.	Plain Closet, complete as described.								21.00	

#### CLOW'S DOUBLE TRAP SIPHON CLOSETS.

(MADDEN'S PATENT.)







M -102

M-103

Includes Double Trap Siphon Closet, with Seat and Lid hinged to Bowl, Round Cornered Tank 23 x 12 x 15 inches, with Nickel-plated Brass
Brackets, Flush, Supply, and Air Pipes, Pull and Chain, Pipe Holders with Buffer,
Brass Floor Flange, Bolts, and Rubber Gasten.

M-102	Embossed Closet, complete as described												-					\$52.00
M-103.	Plain Closet, complete as described .	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	51.00

All Tanks for operating our Jet Closets contain sufficient water for three successive flushes.

Oak and Cherry Tanks and Seats carried in steek. Quartered Oak, Sycamore, Walnut, or Ash furnished to order without extra cost.

White or Bird's eye Maple, Red or White Mahogany, extra 400.

Italian Marble Floor Slab, 26 x 26 inches, 12 inches thick, countersunk to fit closet, as shown, add \$3.00.

For roughing in allow 173 inches from wall to center of outlet.

#### CLOW'S SIPHON JET CLOSETS, LOW-DOWN TANK.

MADDEN'S PATENTA







M-110.

M-111.

Includes Oval Siphon Jet Closet, with concealed Jet Pipe, Seat hinged to Bowl, Low-down Operating Tank, Nickel Plated Rod and Rod Guide with Pull, Brass Floor Flange, Bolts, and Rubber Gasket.

M-110.	Embossed Closet, complete as described,			-					\$50 00
M-111.	Plain Closet, complete as described,								49.00
If Bowl	is decorated, add								10.00

Tanks and Seats of Quartered Oak and Cherry carried in stock. Sycamore, Walnut, White or Bird's-eye Maple, Red or White Mahogany, extra, \$4.00.

For roughing-in, allow 15 inches from wall to center of outlet.

We guarantee two complete flushes from our Low-down Tank, a feature particularly valuable when the water supply is intermittent or when the tank refills slowly, owing to light pressure. Our Valve-regulating device can be adjusted to control perfectly the amount of water released at each flush, thus preventing any waste.

These Closets are designed for locations where height of ceiling will not permit using the ordinary type of Water Closets. They can be set up and successfully operated in any room having not less than 4½ fect of wall space.

#### CLOW'S DEEP SEAL SIPHON HOPPER CLOSETS, LOW-DOWN TANK.

(MADDEN'S PATENT.)







M-118.

M-110

Includes Oval Deep Seal Siphou Hopper Closet, Seat hinged to Bowl, Low-down Operating Tank, Nickel Plated Rod and
Rod Guide with Pull, Brass Floor Flange, Bolts, and Rubber Gasket.

M-118.	Embossed Closet, complete as described,								\$24.00
M-119.	Plain Closet, complete as described.				_				23 00

Tanks and Seats of Quartered Oak and Cherry carried in stock. Sycamore, Walnut, White or Bird's-eye Maple, Red or White Mahogany, extra, \$4.00.

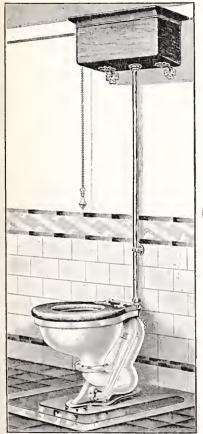
For roughing-in, allow 19 inches from wall to center of outlet.

We guarantee two complete flushes from our Low-down Tank, a feature particularly valuable when the water supply is intermittent or when the tank refills slowly, owing to light pressure. Our Valve-regulating device can be adjusted to control perfectly the amount of water released at each flush, thus preventing any waste.

These Closets are designed for locations where the height of ceiling will not permit using the ordinary type of Water Closets. They can be set up and successfully operated in any room having not less than 4½ feet of wall space.

# CLOW'S IRON ENAMELED SIPHON JET CLOSETS.

#### (MADDEN'S PATENT.)







M-126, CHAIN PULL.

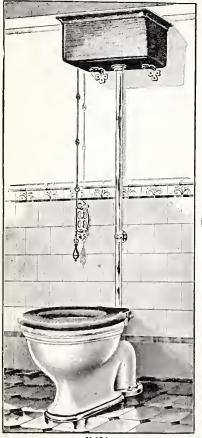
M-127. SEAT OPERATING.

Includes Iron Siphon Jet Closet, Enameled Inside and Outside, with Seat and Lid Hinged to Bowl. No. 2 Round Cornered Tank, 23x12x15 inches, with Nickel Plated Brass Supports, Flush Pipe, Pipe Holders with Buffer, Screws and Washers.

M-126. Complete as described.	0									
M-126. Complete as described, with No. 3 Tank.	5									
M-127. Complete as described, Rod Action, 50.0										
M-127. Complete as described, with No. 3 Tank, Rod Action,	-									
If with N. P. Supply Pipe and Stop Cock, add										
ROUGHING-IN MEASUREMENTS										

M 126. Allow 13 inches from wall to center of outlet.
M 127. Allow 134 inches from wall to center of outlet.
Woodwork either Quartered Oak or Natural Cherry.

## CLOW'S ROYAL PORCELAIN WASH-DOWN CLOSETS. (MADDEN'S PATENT.)







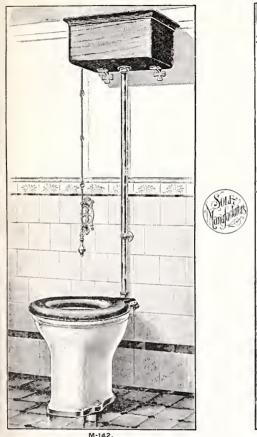
Includes Royal Porcelain Wash-down Bowl, Seat Hinged to Bowl, No. 2 Round Cornered Cherry or Quartered Oak Tank, 23x12x15 inches,
Nickel Plated Brass Tank Supports, Flush Pine with Protector, Fancy Wall Guide, Link Rod

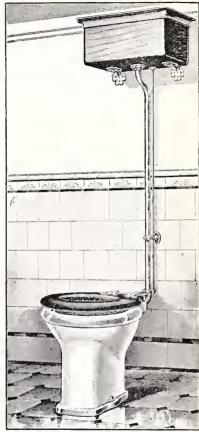
tricaci a farca priasa a faria bapports, a faria a fpc with a forceron, a faric, or an orang, prince and										
and Pull, Brass Floor Flauge, Bolts, and Rubber Gasket.	Class A Class B									
M-134. Complete as described,	\$49.50 \$43.50									
M-134. Complete as described, with No. 3 Tank	. 47.50 41.50									
M-135. Complete as described,	48.00 43.00									
M-135. Complete as described, with No. 3 Tank	46.00 41.00									
If without Wall Guide, deduct \$2.50. Nickel Plated Brass Supply Pipes, with Stop Valve, e.	xtra, \$2.75. If with Ash									
Tank and Nickel Plated Iron Tank Supports, deduct \$2.50.										
The state of the s	Comments to Comment Colored									

RUCOHING-IN MEASUREMENTS - M 134. Allow 5 inches from wall to center of outlet. M-135. Allow 25 inches from wall to front of closet. These closets, owing to their simple construction and durability, are especially adapted for use in fire-proof and public buildings. The Royal Percelain Wash down Bowl is of Fire Clay, white glazed laside and outside. The thickness of this material insures great strength, which is desirable where closets are subjected to hard usage and where carbenaver faxtures are required.

## CLOW'S ROYAL PORCELAIN HOPPER CLOSETS.

(MADDEN'S PATENT)





M-143.

Includes Royal Porcelain Hopper Closet, Seat Hinged to Bowl, No. 3 Round Cornered Cherry or Quartered Oak Tank, Nickel Plated Brass
Tank Supports, Flush Pipe with Protector, Brass Floor Flange, Bolts and Ruhber Gasket.

											Class A.	Class B.
M-142.	Complete as	described.	with	Wall Guide.	Link	Rod	l and Pull.				842.75	\$37.75
	Complete as											45.00
	1				,					-		20100

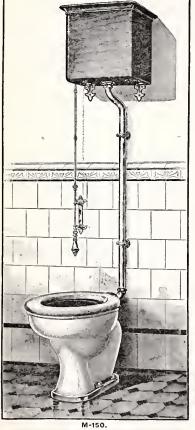
If without Wall Guide, deduct \$2.75. Nickel Plated Brass Supply Pipe with Stop Valve, extra, \$2.75. If with Ash Tank and Nickel Plated Iron Tank Supports, deduct \$2.50.

ROUGHING-IN MEASUREMENTS: - Allow from wall to center of outlet, M 142, 17 inches; M 143, 16 inches.

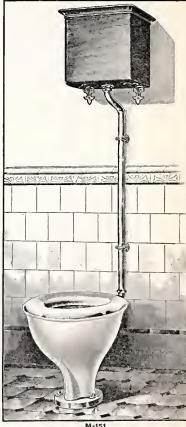
These Closets, owing to their simple construction and durability, are especially adapted for use in fire-proof and public huildings. The Royal Porcelain Wash-down Bowl is of Fire Clay, white glazed inside and outside. The thickness of this material insures great strength, which is desirable where Closets are subjected to hard usage and where earthcower fixtures are required.

# CLOW'S ROYAL PORCELAIN SEAT CLOSETS.

(MADDEN'S PATENT.)







Includes Royal Porcelain Bowl and Seat in one plece, Round Cornered Combination Pull and Automatic Tank, Nickel Plated Brass Tank
Supports, Flush Pipe, Flush Pipe Holders, Link Rods with Wall Guide and Pull, Brass
Flush Pipe, Flush Pi

			r 1001	riange	, noits n	na Kub	oer Gas	sket.				CIBSS A	CIBSS D
M-150.	Complete as described,							-	-			. \$48.75	\$42.75
M-151.	Complete as shown,											43.00	38.00
M-150.	If without Wall Guide, d	eduet	<b>\$2.50.</b>	Nieke	Plated	Brass	Suppl	ly Pip	e with	Stop	Valve.	, extra, \$2.75.	If with

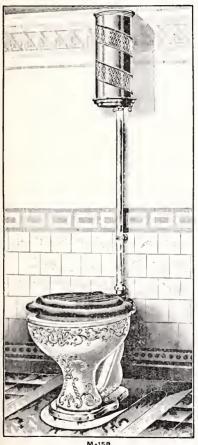
Ash Tank and Niekel Plated Iron Tank Supports, deduct \$2.50. ROUGHING-IN MEASUREMENTS-Allow from wall to center of outlet, M-150, 74 inches; M-151, 13 inches,

Our Royal Porcelain Seat Closets are of fire clay, white glazed inside and outside. The thickness of the material insures great strength Closets are flushed by a Combination Tank which operates by Pull or discharges automatically in case of neglect in using the Pull. Tanks and Flush Pipes can be arranged to go back of partition or in corridor when so ordered. These closets are adapted for use in Hospitals, Lunatic Asylums, Barracks, Railway Stations, Factories and other public places. The absence of woodwork lasures cleanliness and prevents contagion. Where floors are of cement or tile and provided with drain, closets can be thoroughly

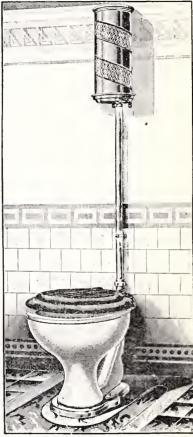
cleansed by using a hose

#### CLOW'S AUTOMATIC SIPHON JET CLOSETS

(MADDEN'S PATENT.)







M -159.

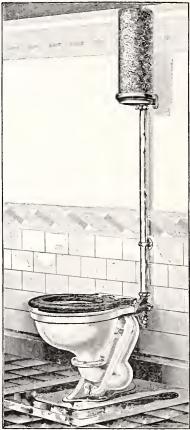
Includes Oval Siphon Jet Closet, with Automatic Valve, Seat and Lid attached to Bowl, Galvanized Iron Closed Tank incased in Nickel-plated Brook and Flush Pipe with Protector Bross

Floor Flange, Bolts, and Rubber Gasket.

M-158.	Embossed Closet, complete as described								<b>\$46.00</b>
M-159.	Plain Closet, complete as described .					-	_		45.00
If withou	ut Nickel-plated Ornamental Brass Tank	Cover,	deduct			-		-	4.00

## CLOW'S AUTO-JET ENAMELED IRON CLOSET.

MADDEN'S PATENT,





M-166.

Includes Iron Siphon Jet Closet, Enameled all over, with Automatic Valve, Seat hinged to Bowl, Galvanized Iron Closed Tank, Japanned Brackets, and Nickel-plated Flush Pipe with Protector.

Complete as described,	_						\$36.00
If with Nickel-plated Ornamental Brass Tank Cover, add						t	4.00

Without any exception, this is the best Water Closet made for use in Schools, Factories, Stores, Saloons, or where the fixture is liable to receive hard usage,

These Closets will work successfully on any pressure over 20 pounds. For roughing-in allow 141 inches from wall to center of outlet.

#### CLOW'S AUTO-MARINE CLOSET.

(MADDEN'S PATENT.)





M-171.

Includes Oval Deep Seal Earthenware Hopper with Jet Action, Automatic Valve, Reinforced Seat attached to Bowl, Galvanized Iron Closed
Tank and Tank Support, Nickel Plated Brass Flush Pipe with Protector, Brass Floor Flange, Bolts and Rubber Gasket.

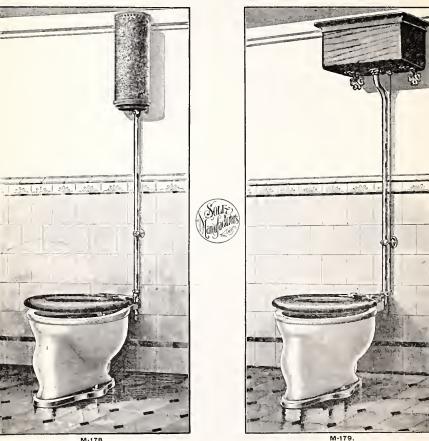
Complete as described.						•	<b>*34 00</b>
If with Nickel Plated Ornamental Brass Tank Cover, add							4.00

For roughing-in allow 15 inches from wall to center of outlet.

This Closet is particularly adapted to Boat Construction, where the Closet is flushed from a gravity tank located on deck, above the fixture.

We would be pleased to correspond with any who desire Closets to meet conditions as above.

# CLOW'S AUTOMATIC "JUVENILE" CLOSETS.



M-178. M-179.
Includes Oval Deep Seal "Juvenile" Vitreous Bowl, Jet Action, with Seat attached, Nickel Plated Brass Flush Pipe, Holder with Buffer, Brass Floor Flange, Bolts and Rubber Gasket,

- M-178. Complete as shown and described, with Galvanized Iron Closed Flush Tank, Japanned Tank Bracket, and Automatic Valve. 34.00
- M-179. Complete as shown and described, with Open Tank, Automatic Seat, Rod Action, and Nickel Plated
  Brass Tank Supports,
  36.00

ROUGHING-IN MEASUREMENTS.

Allow from wall to center of outlet, M-178, 15 lnches; M-179, 13 lnches.

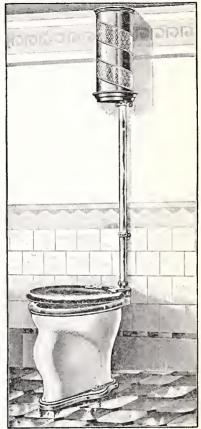
The above Closets are intended for use in primary schools. Their beight, being less than standard fixtures, makes them desirable for children's use.

### CLOW'S AUTOMATIC HOPPER CLOSETS.

#### (MADDEN'S PATENT.)







M-186.

M-187.

Includes Oval Deep Seal Siphon Hopper Closet, with Automatic Valve, Seat attached to Bowl, Galvanized Iron Closed Tank encased in Nickel Plated Ornamental Brass Cover, Nickel Plated Brackets, Flush Pipe with Protector,

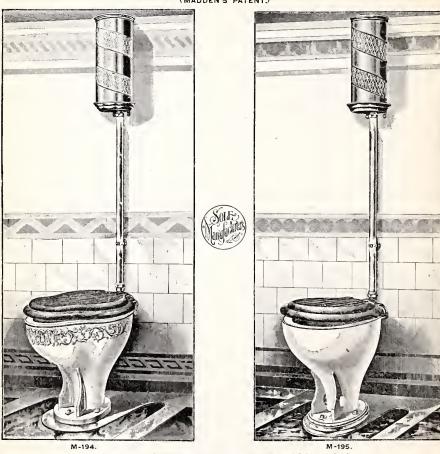
Brass Floor Flange, Boits and Gasket.

M-186.	Embossed Closet, complete as described,			,				-	\$39 00
M-187.	Plain Closet, complete as described,								38 00
If witho	ut Nickel Plated Ornamental Brass Tank	Cover	, dedu	ct				٠.	4.00

These Closets will work successfully on any pressure over 20 pounds. For roughing-in allow 15 inches from wall to center of outlet

### CLOW'S AUTOMATIC HOPPER CLOSETS.

(MADDEN'S PATENT)



M.194 Includes Embossed Tail Lipped Flushing Rim Hopper, with Automatic Valve, Seat and Lid attached to Bowl. Galvanized Iron Closed
Tank, incased in Nickel Plated Ornamental Brass Cover, Nickel Plated Brackets and Flush Pipe,
with Protector, Brass Floor Flange, Bolts, and Gasket.

M.195 includes Plain Tall Oval Flushing Rim Hopper, with Automatic Valve, Seat and Lid attached to Bowl, Galvanized Iron Closed Tank, incased in Nickel Plated Ornamental Brass Cover, Nickel Plated Brackets and Flush Pipe, with
Protector, Brass Floor Flange, Bolts, and Gasket.

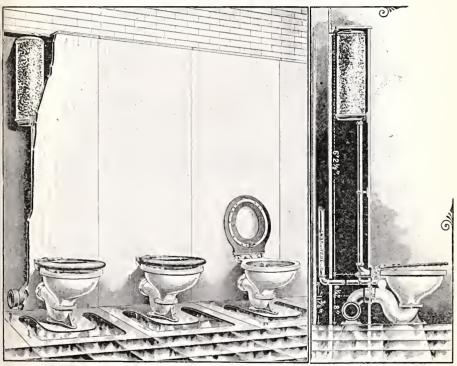
	Complete as						-					\$34.00
	Complete as											29.00
If withou	ut Nickel Pla	ted Ornamental	Bras	s Tank	Cove	r, de	luct					4.00

M.161, for roughlng-in allow 14 inches from wall to center of outlet, M.162, for roughlng-in allow 13 inches from wall to center of outlet.

#### CLOW'S AUTOMATIC IRON WASH-DOWN CLOSETS.

(MADDEN'S PATENT.)

FOR HOSPITALS, ASYLUMS, SCHOOLS AND OTHER PUBLIC BUILDINGS.



M-200.

Automatic Iron Wash-Down Closet. Enameled inside and outside, Automatic Valve and Reinforced Sent attached to Bowl, Galvanized Closed Tank, Flush Pipe and Holders. Asphalted Iron Drainage Connection. with adjustable Standard.

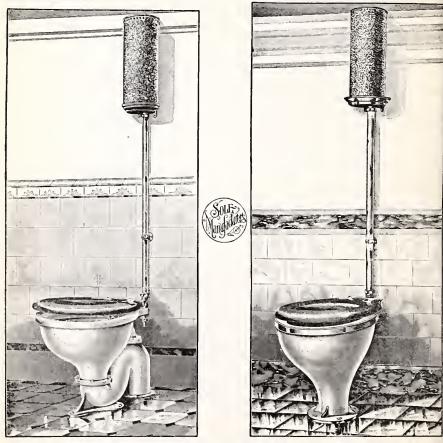
The Soil Pipe to be run in front of wall, or back of partition, above the floor, as is often necessary in fireproof and other buildings.

The inlet of drainage connections being cast on different angles, and made adjustable, the necessary pitch can be obtained for any number of closets.

Height of Closet, 17 inches; height from floor to top of Tank, 7 feet and 5 inches; distance from partition to front of Closet, 22 inches; Closets, center to center, 30 inches. Can furnish with other centers when so ordered, but distance given is Standard.

### CLOW'S AUTOMATIC HOPPER CLOSETS.

(MADDEN'S PATENT.)



M-207.

M-208.

Includes from Flushing Rim Hopper, Enameled Iaside and Outside, Automatic Valve and Seat attached to Bowl, Galvanized Iron Closed Tank,
Japanned Brackets, and Flush Pipe with Protector.

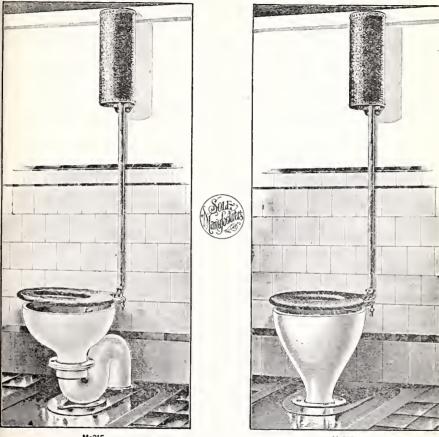
M-207.	Complete as described,	with Trap and Bras	s Vent	Coup	ling on	Hand	Hole,					<b>\$26</b>	.00
M-208.	Complete as described,	with Long Oval Ho	opper,							-	٠,		.00
If with ?	Nickel Plated Ornament	tal Brass Tank Cove	r, add								(	4	.00

M 207, for roughing in, position of trap as illustrated, allow 41 inches from wall to center of outlet; from center of outlet of trap 10 inches. If trap to right or left of bowl, 141 inches from wall to center of outlet.

M 208, for roughing in allow 141 inches from wall to center of outlet.

### CLOW'S AUTOMATIC HOPPER CLOSETS.

(MADDEN'S PATENT.)



M-215.

M-216.

Includes Iron Round Hopper, Enameled Inside and Outside, Automatic Valve and Seat attached to Bowl, Galvanized Iron Closed Tank and Flush Pipe.

M-215. Complete as described, with Trap									\$21.00
omplete as described, with long Hopper									10 00
Il with Hand Hole and Vent Coupling, add to list									. 1.00
If Painted outside, deduct from list				-					1.00

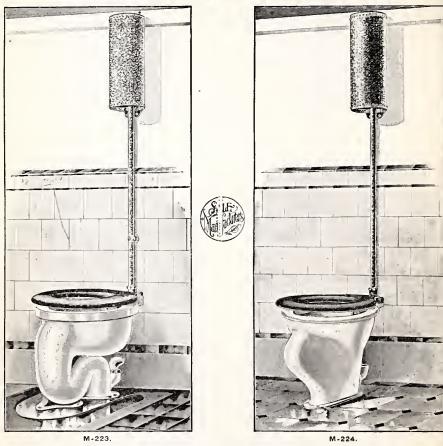
### ROUGHING-IN MEASUREMENTS.

M-215. When trap is in position, as illustrated, 4½ inches from wall line to center of outlet. When trap is placed to right or left of bowl, 14½ inches from wall line to center of outlet. From center of bowl to center of outlet of trap, 10½ inches.

M-216. From wall line to center of outlet, 14½ inches.

### CLOW'S AUTOMATIC ENAMELED IRON CLOSETS.

(MADDEN'S PATENT)



Includes Iron Closet, Enameled Inside and Outside, Automatic Valve, Seat Hinged to Bowl, Galvanized Iron Closed Tank, Flush Pipe and Tank Supports, Screws and Washers.

 M-223.
 Washout, complete as described,
 \$26.00

 M-224.
 Combined Hopper and Trap, complete as described,
 25.00

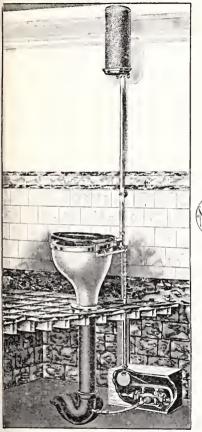
#### ROUGHING-IN MEASUREMENTS.

M.223. Allow 14 luches from wall to center of outlet; 74 inches from floor to center of vent.
M.224. Allow 154 inches from wall to center of outlet; 3 inches from floor to center of vent.

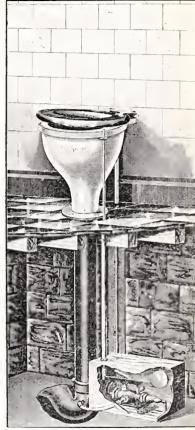
These Closets will work successfully under any pressure over 16 pounds.

### CLOW'S AUTOMATIC FROST-PROOF HOPPER CLOSETS.

(MADDEN'S PATENT.)







M-231.

M-232.

M-231 includes Long Oval Iron Flushing Rim Hopper, Enameled Inside and Outside, Automatic Valve and Seat attached to Bowl,
Galvanized Iron Closed Tank, Brackets, N. P. Flush Pipe with Protector,
Frost prote Valve, Pive-foot Waste Pipe and Trap.

M.232 includes Long Oval Iron Flushing Rim Hopper, Enameled Inside and Outside, Seat attached to Bowl, and Frost-proof Valve,
Five-foot Waste Pipe and Trap.

	Complete as described,	-	-	-		-		-	-	-	-		\$28.00
M-232.	Complete as described,		-	-	~		-	-	-	-		-	20.00

These Closets will work successfully on any pressure over 20 pounds.

ROUGHING-IN MEASUREMENTS.

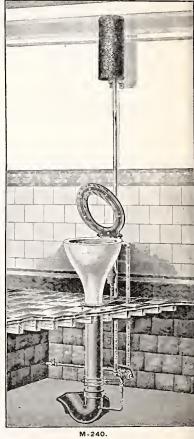
Allow, from wall to center of outlet, M-231, 141 inches; M-232, 12 inches.

### CLOW'S AUTOMATIC FROST-PROOF HOPPER CLOSETS.

(MADDEN'S PATENT.)







M 239 includes Cust Iron Hopper, Enameled inside and outside, with Self-raising Reinforced Seat attached to Bowl, Frost-proof Valve and Chain, Trap and five feet of Pipe with Flanged and Spigot end.

M 240 includes Cast Iron Hopper, Enameled inside and outside, with Self-raising Reinforced Seat attached to Bowl, Galvanized Tank, Frostproof Valve, Trap and five feet of Pipe with Flanged and Spigot end

Price							\$13.00	819.50
Price, without Trap and Pipe					-		11.00	17.50
If Hoppers are painted outside.	, deduct fi	rom list, *1	.00.					

ROUGHING-IN MEASUREMENTS.

Allow from wall to center of outlet, M 239, 14 inches; M 240, 16 inches.

# CLOW'S PEDESTAL WASHOUT CLOSETS.

(MADDEN'S PATENT.)







Number | Oval Pedestal Washout Closet, with Seat and Lid Hinged to Bowl, Round Cornered Single Discharge Siphon Tank, with Nickel-plated Brass Supports, Flush and Supply Pipes, Pull and Chain, Pipe Holders with Buffer, Brass Floor Flange, Bolts and Rubher Gasket, Vent to Wall.

M-247.	Embossed Closet, complete as described,								_		\$28.00
	Plain Closet, complete as described,		_				_				27.00

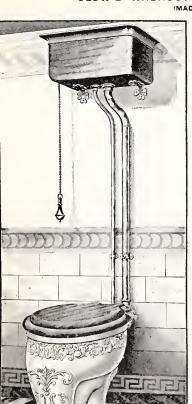
If without Supply Pipe, deduct \$2.75.
If without Supply and Flush Pipe, deduct \$6.25.

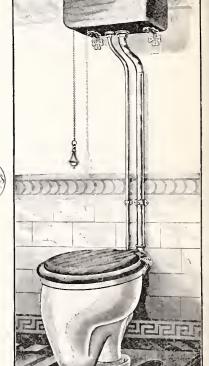
Oak and Cherry Tanks and Seats carried in stock. Quartered Oak, Sycamore, Walnut or Ash furnished to order without extra cost. White or Bird's-eye Maple, Red or White Mahogany, extra, \$4.00.

Italian Marble Floor Slah, 26 x 26 inches, 114 inches thick, countersunk to fit closet, as shown, add \$8.00.

For roughing in allow 1314 inches from wall to center of outlet.

### CLOW'S WASHOUT CLOSETS, FRONT OUTLET. (MADDEN'S PATENT.)





M - 255.

Number 1 Front Outlet Washout Closet with Seat and Lid Hinged to Bowl, Round Cornered Single Discharge Siphon Tank, with Nickel-plated Brass Supports, Flush and Supply Pipes, Pull and Chain, Pipe Holders with Buffer, Brass Floor Flange, Bolts and Rubber Gasket.

\$27.00 M-255. Embossed Closet, complete as described, 26.00 M-256. Plain Closet, complete as described,

If without Supply Pipe, deduct \$2.75.
If without Supply and Flush Pipe, deduct \$6.25.

Oak and Cherry Tanks and Scats carried in stock. Quartered Oak, Sycamore, Walnut or Ash furnished to order without extra cost.

White or Bird's-eye Maple, Red or White Mahogany, extra, \$4.00.

Italian Marble Floor Slah, 28 x26 inches, 112 inches thick, countersunk to fit closet, as shown, add \$8.00.

For roughing in allow 1314 inches from wall to center of outlet.

### CLOW'S WASHOUT CLOSETS, BACK OUTLET. (MADDEN'S PATENT.)







Number 1 Back Outlet Washout Closet, with Seat and Lid Hinged to Bowl, Round Cornered Single Discharge Siphon Tank, with Nickle plated
Supports, Flush and Supply Pipes, Pull and Chain, Pipe Holders, Went in Wall
Flance, Botts, and Rubber Gaskets, Vent in Wall

	rauge, Do	nus a	110 11	BUU	er G	asne	 еші ій	** **	١.						
						-						_			\$27.00
M-264.	Plain Closet, complete as described,		-		_					-	-		-	_	26.00

If without Supply Pipe, deduct \$2.75.
If without Supply and Flush Pipe, deduct \$6.25.

Oak and Cherry Tanks and Seats carried in stock. Quartered Oak, Sycamore, Walnut or Ash, furnished to order without extra cost.

White or Bird's-eye Maple, Red or White Mahogany, extra \$4.00.

Italian Marble Floor Siah, 26 x 26 inches, 1½ inches thick, countersunk to itoset, as shown, add \$8.00.

For roughing-in allow 15½ inches from wall to center of outlet.

### "CIRCLE" SIPHON JET.



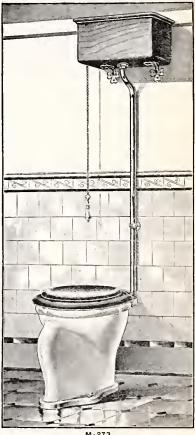
M - 271

Includes "Circle" Siphon Jet Bowl with seat and lid attached, Cherry or Oak Single Discharge Siphon Tank, Nickel Plated Iron Tank Supports, Nickel Plated Flush Phpe, Pull and Chain, Pipe Holder with Buffer, Brass Floor Flange, Bolts and Rubber Gasket.

\$20.00 Complete as described,

For roughing in allow 94 inches from wall to center of outlet.

### WASH-DOWN SIPHON.



M-273.

Includes Wash-down Siphon Bowl with Seat and Lid attached, Cherry or Oak Single Discharge Siphon Tank, Nickel Plated Iron Tank Supports, Nickel Plated Flnsh Pipe, Pull and Chain, Pipe Holder with Buffer, Brass Floor Flange, Bolts and Rubber Gasket.

Plain, complete as described,		-	\$18.00
Embossed, complete as described,		-	18.50

For roughing in, allow 14 inches from wall to center of outlet.





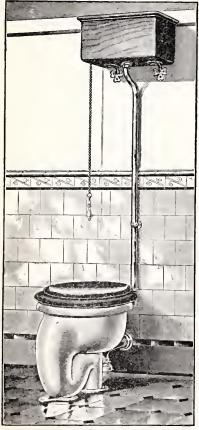


Includes Front Outlet Washout Closet, with Seat and Lid Hinged to Bowl, Round Cornered Tank, 17x8x10 inches, with Nickel Plated Tank Supports, Flush and Supply Pipes, Pull Chain and Pipe Holder with Buffer.

Plain, complete as described.							_		\$16.00
Emoossed, complete as described,			_			_	_		17.00
If without Supply Pine, deduct									1.50
If without Flush Pipe and Slip Joint, deduct			-	_					2.50

For roughing-in, allow 101/2 inches from wall to center of outlet; 6 inches from floor to center of vent.

# CLOW'S ENAMELED IRON CLOSETS.





M-286.

M-287

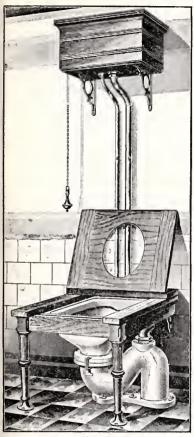
Includes Iron Closet, Enameled Inside and Outside, Seat and Lid Hinged to Bowl, Cherry or Oak Single Discharge Siphon Tank, Nickel Plated Iron Tank Brackets, Nickel Plated Flush Pipe and Slip Joint, Pipe Holder with Buffer, Screws and Washers.

M-286.	Washout, complete as described,						*21.00
M-287.	Combined Hopper and Trap, complete as described,	-					20.00
If with	Nickel Plated Supply Pipe, add						1.50
If with	out Nickel Plated Flush Pipe and Slip Joint, deduct	-	-	-			2.50

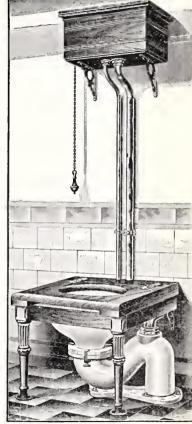
#### ROUGHING-IN MEASUREMENTS.

M-286. Allow 13 inches from wall to center of outlet; 7‡ inches from floor to center of vent. M-287. Allow 14 inches from wall to center of outlet; 3 inches from floor to center of vent.

### CLOW'S HOPPER CLOSETS.







M-294.

M-295.

Includes Earthenware Short Flushing Rim Hopper and Trap, Single Discharge Siphon Tank, Seat and Painted Legs, Nickel Plated Iron
Tank Brackets, Flush and Supply Pipes, Pull and Chain, Pipe Holders with Buffer and Bolts.

M-294. Complete, with Square Hopper, M-295. Complete, with Oval Hopper,															-	\$22.00 20.00
If with Seat Cover, add	•	-	-		-	-		-		-	-		-	-	-	
II with Seat Cover, and				-			-	_			-		_			1.00
If without Nickel Plated Supply Pipe de	educt										٠.					1.50
If without Nickel Plated Flush Pipe dec	luct			_			-		_			_	_			2.00

#### ROUGHING-IN MEASUREMENTS.

Allow 12 inches from wall to center of outlet; 11 inches from center of bowl to center of outlet; 83 inches from center of howl to center of vent; 133 inches from center of vent to floor.

### CLOW'S HOPPER CLOSETS.



M-302.

M - 303

Includes Tall Flushing Rim Hopper, Single Discharge Siphon Tank, Seat and Cover, Nickel Plated Iron Tank and Seat Brackets, Flush and Supply Pipes, Pull and Chain, Pipe Holders with Buffer, and Bolts.

M-302. Complete, with Oval Hopper,			_							<b>*16.75</b>
M-303. Complete, with Round Hopper, .							-		-	. 16.00
If without Nickel Plated Supply Pipes, deduct .								-		1.50
If without Nickel Plated Flush Pipes, deduct										2.00

### CLOW'S HOPPER CLOSETS.







M-310.

M - 311.

Includes Flushing Rim Hopper enameled inside and outside, Seat with weight, Plain Single Discharge Siphon Tauk, Nickel Plated Ifon Tank
Brackets, Flush and Supply Pipes, Rubber Connections to Bowl, Pull and Chain, and Pipe Holders with Buffer.

			 	 	,			,						/
M-310.	Complete with Short Oval Hopper and	Trap			_									\$20,00
M-311.	Complete with Tall Oval Hopper, .													17.00
	ut Nickel Plated Supply Pipe, deduct .	Ξ.	-		_	_		-	-		-		_	1.50
If witho	ut Nickel Plated Flush Pipe, deduct						_							2.00

#### ROUGHING-IN MEASUREMENTS.

M-310. Allow 11 inches from wall to center of outlet; 11 inches from center of bowl to center of outlet; 8½ inches from center of bowl to center of vent; 12 inches from center of vent to floor.

M-311. Allow 12 inches from wall to center of outlet.

### CLOW'S ROYAL PLUNGER CLOSETS.







M-319. WITH OFFSET

\$12.00

This Closet can be furnished with Straight Outlet, when desired, at same price.

### CLOW'S ENAMELED IRON HOPPER CLOSETS.





Price, each .



M-325. STRAIGHT HOPPER, SELF-RAISING SEAT.

### PHILADELPHIA HOPPERS.



M-330. OLD STYLE.



M-221 NEW STYLE

### CLOW'S ENAMELED IRON HOPPERS AND WASHOUTS.



M-338. ROUND F. R. HOPPER.



M-339. OVAL F. R. HOPPER.



M-340. HOPPER AND TRAP.



M-345. WASHOUT.

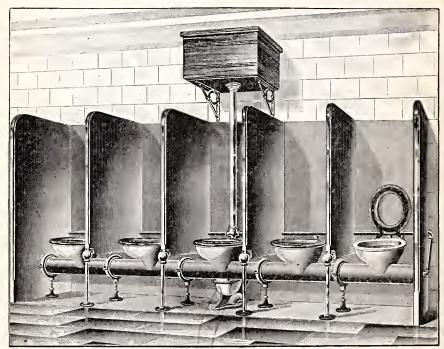


M-346. COMBINED HOPPER AND TRAP.

Picups	M-338	M-339	M-340	M-345	M-346
FIGURE	M-999	M-999	M-940	11-949	M-240
ENAMELED INSIDE AND PAINTED OUTSIDE, WITHOUT SEAT	5.00	5.50	8.50	13.50	12.00
ENAMELED INSIDE AND OUTSIDE, WITHOUT SEAT	6.50	7.00	10.75	16.50	15.00
ENAMELED INSIDE AND PAINTED OUTSIDE, WITH SEAT	8.25	8.75	11.75	16.75	15.25
ENAMELED INSIDE AND OUTSIDE, WITH SEAT	9.75	10.25	14.00	19.75	18.25

### CLOW'S SIPHON JET RANGE CLOSETS.

(MADDEN'S PATENT.)



M-353.

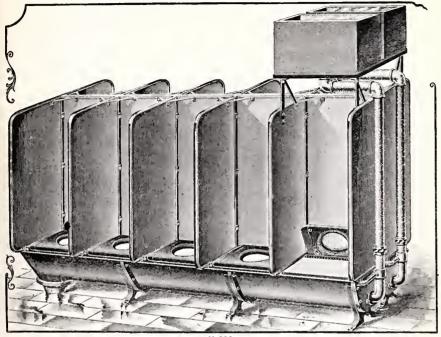
Includes Five Section Siphon-Jet Range Closet, Adjustable Stundards, Heavy Oak reinforced Seats attached to Bowls, Automatic Siphon Tunk with Galvanized Iron Brackets, Brass Flush Pipes, State Portitions and Backs, Brass Legs and Brass Clamps.

DIMENSIONS-Height of Closet, 184 inches, height to top of partition, 5 feet; depth, 27 inches; distance, center to center, 27 inches,

	Without Pa	artitions.	With Slate Partitl		With Painted Cast- comple	
Number of Scats.	Enameled Inside and Painted Outside.	Enameled Inside and Outside,	Enameled Inside and Painted Outside,	Enameled Inside and Outside.	Enameled Inside and Painted Outside.	Enameled Inside and Outside
3 .	. \$108 00	\$120,00	\$194.00	<b>*206 00</b>	<b>*126 00</b>	\$138 00
4 .	. 138.00	154.00	249.00	265.00	160.50	176 50
5 .	. 168.00	188.00	302.50	322.50	195.00	215.00
6.	. 198.00	222.00	359.50	383.50	229.50	253,50
7 -	. 228.00	256.00	414.00	442.00	264 00	292.00

If east-iron partitions are galvanized, add \$3.50 for each partition. For roughing-in allow 15½ inches from wall line to center of outlet.

### CLOW'S AUTOMATIC FLUSH DOUBLE RANGE CLOSET.



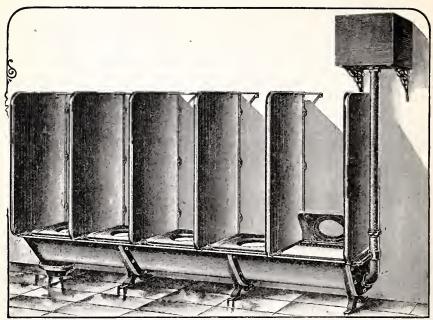
M-358.

Includes Double Range Closet with Perforated Wash-Down Pipes on Front and Back, Galvanized Iron Flush Pipes, Ash Seats reinforced with Galvanized Iron Bands, heavy Brass Hinges, Painted Cast-Iron Partitions and Backs and Copper-Lined Automatic Flushing Tanks.

1	Leng Ran		of	Number of Seats.		ze of eats.	Number of Partitions.	Prices, Comp Enameled.	lete as described. Painted.
4	feet	0	inches.	4	24	inches.	6	\$117.00	8 98,00
6	6.6	0	6.6	6	24	6.6	8	157.00	128.00
8	. 4	0	6.6	8	24	44	10	203.00	163.00
10	. 6	0	6.6	10	24	46	12	242.00	194.00
12	4.6	0	66	. 12	24	4.6	14	288.00	229.00
14	4.6	0	4.4	14	24	"	16	327.00	258.00
16	4.7	0	4.6	16	24	66	18	366.00	287.00
18	4 .	0	46	18	24	4.6	20	406.00	317.00
20	4.6	0	• 6	20	24	"	22	445.00	345.00
4	4.6	6	6.6	4	27	"	6	122.00	101.00
6	. 6	9	44	6	27	6.6	8	164.00	132.00
9	4.	0	44	8	27	6.6	10	213.00	170.00
11	4.6	3	44	10	27	6.6	12	255.00	201.00
13		6	66	12	27	14	14	304.00	237.00
15	46	9	66	14	27	6.6	16	346.00	267.00
18	4.4	0	44	16	27	4.6	18	388.00	298.00
20	4.6	3	4.6	18	27	4.6	20	430.00	329.00

If with Galvanized Partitions or Backs, add to above prices for Partitions, each, \$3.00; for Backs, each, \$3.50.

### CLOW'S AUTOMATIC FLUSH RANGE CLOSET.



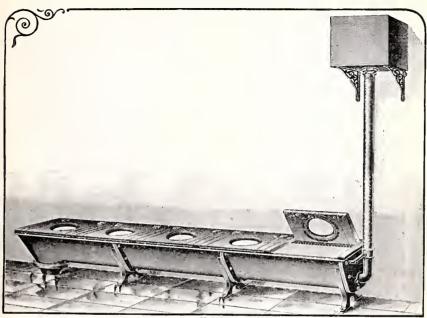
Includes Range Closet with Perforated Wash-down Pipe on front and back, Galvanized Iron Flush Pipe, Ash Seats reinforced with Galvanized Iron Bands, Heavy Brass Hinges, Painted Cast Iron Fartitions, and Copper Lined Hardwood Automotic Flushing, Tank with Galvanized Iron Brackets.

				ratomic ria	5		carrinnea man	Diucacio.	
		gth inge		Number of Seats.		ze of rats.	Number of Partitions	Price complet Enameled.	e as described Painted,
4	feet	t o i	inches.	2	24 i	nches.	3	<b>\$</b> 54.00	\$ 44.00
- 6	6.	0	4.6	3	24	41	4	72,00	57.00
8	4.6	0	66	4	24	** }	5	92.00	73,00
10	4.6	0	4.6	5	24	44 /	6	109.00	85.00
12	6.6	0	4.6	6	24	11/	7	130.00	100.00
14	"	0	6.6	7	24	46	8	147.00	112.00
16	6 4	0	66	8	24	eji	9	164.00	125.00
18	64	0	6.6	9	24	4.	10	181.00	137.00
20	4.4	0	44	10	24	fee	11	199.00	149.00
4	"	6	44	2	27		3	56.00	46.00
G	66	9	4.4	3	27/	64	4	75.00	59.00
- 9	4.6	0	4.6	4	27	11	5	97.00	75.00
11	6 4	3	4.6	5	27	64	6	116.00	88.00
13	4.4	6	4.6	6	27	44	7	137.00	104.00
15		9	6.6	7	27	44	8	156.00	117.00
18	4.6	0	6.6	8	27	64	9	175.00	130.00
20	64	3	**	9	27	64	10	194.00	143.00

If with galvanized partitions, add, for each partition, \$3.00.

Unless otherwise ordered, Ranges will be sent as shown, viz.: with ontlet on left hand end; but when desired Ranges can be furnished with the outlet on right hand end.

### CLOW'S AUTOMATIC RANGE CLOSET.



M-368,

Includes Automatic Flush Range Closet with Perforated Wash-Down Pipe on Front and Back, Galvanized Iron Flush Pipe, Ash Scats reinforced with Galvanized Iron Bands, Heavy Brass I linges and Copper-Lined Hardwood Automatic Flushing Tank with Galvanized Iron Brackets.

		a raining addition	in can ameed from	mackets.		
Length of Range.	Number of Seats.	Size of Scats	Prices, comple Enameled,	ete as shown. Painted.	Prices with Enameled,	out Seats. Painted.
4 feet 0 inches.	2	24 inches.	\$46.00	\$35.50	\$40.50	<b>\$30.00</b>
6 0	3	24 "	61 50	45.00	53.00	36 50
8 0	4	24 ''	80.00	58.50	77.00	47.00
10 " 0 "	5	24 ''	95 00	67 00	81.00	53.00
12 " 0 "	6	24 " /	113.50	79.50	96.00	62.50
14 16 0 11	7	24 "	127.50	89 00	107.50	69.00
16 4 0 44	8	24 "	143 00	99.00	120.00	76.00
18 " 0 "	9	24 ''	158 50	107.50		
20 44 0 44	10	24 /	173.00	116 50	131 50	82.00
	10	^7	113.00	110 50	144 00	88.50
4 " 6 "	2	27 "	49.00	37 50	43.00	31.50
6 9	3	27 16	65.00	47.00	57.00	38.50
9 0	4	27 "	86.00	61.50	74.00	50.00
11 " 3 "	5	27 "	102.00	72.00	87.50	58.00
13 " 6 "	6	27 "	122.00	84.50	104.50	67.00
15 " 9 "	7	27 "	136.00	95.00	105.00	75.00
18 '' 0 ''	8	27 "	154.50	105.00	131.50	82.00
20 " 3 "	9	27 "	171.00	114.00	145.00	88.50
					2.0.00	00.00

Unless otherwise ordered Ranges will be sent as shown, viz: with Outlet on left hand end, but when desired, Ranges can be furnished with the Outlet on right hand end.

### EARTHENWARE SIPHON JETS.

SEAT ATTACHMENT.





M-374.

STYLE	M-373	M-374
EACH	18.75 40	17.25 .40

## EARTHENWARE WASHOUTS.

SEAT ATTACHMENT.



M-378. EMBOSSED, FRONT OUTLET.



M-379. PLAIN, FRONT OUTLET.

NUMBER		-2	3
M-378		11.00	8.80
M-379	EACH PER SET, NET	10.25	8.05

### EARTHENWARE COMBINED HOPPERS AND TRAPS.

SEAT ATTACHMENT.



M-384. EMBOSSED.



M-385. PLAIN.

STYLE	M-384	M-385
EACH	8.80 .85	8.05 .85

Combined Hoppers and Traps will always be furnished with Vent at back, as shown, unless Right or Left Vent is specified.

### EARTHENWARE PEDESTAL WASHOUTS.

OLD STYLE.



M-390. EMBOSSED.



M-391, PLAIN.

NUMBER	 	2 3
M-391	 	11.70 9.50 11 00 8.80 85 .85

Approximate weight of crate, 650 pounds.

### EARTHENWARE WASHOUTS.

OLD STYLE.



M-396. EMBOSSED, FRONT OUTLET.



M-397. PLAIN, FRONT OUTLET.

NUMBER	2	3
M-396	10.25	8.80 8.05 .85



M-402. EMBOSSED, BACK OUTLET.



M-403. PLAIN, BACK OUTLET

NUMBER		2	3
M-403	EACH	11.70 11.00 .85	8.80 8.05 .85

### EARTHENWARE.

OLD STLYE.



M-408, FRONT OFFSET.



M-409. BACK OFFSET.

### FRONT AND BACK OUTLET OFFSET WASHOUTS.

NUMBER	2	3
M-408 AND M-409 . EACH SPUDS AND COUPLINGS EXTRA . PER SET, NET	10.25 .40	8.05 .40



M-414. EMBOSSED.



M-415. PLAIN.

### COMBINED HOPPERS AND TRAPS.

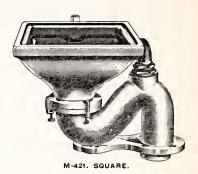
STYLE	M-414	M-415
EACH	8.80 .85	8.05 .85

Combined Hoppers and Traps will always be furnished with Vent at back, as shown, unless Right or Left Vent is specified. Approximate weight of crate, 650 pounds.

### EARTHENWARE.

OLD STYLE.





OVAL AND SQUARE SHORT HOPPERS AND TRAPS.

STYLE .												M-420	M-421
EACH COUPLINGS AND SPUDS EXTRA CLAMPS EXTRA											 T, NI T, NI	5.10 .85 .21	6.85 .85 .21



M-426. OVAL TALL FLUSH RIM HOPPER.



M-427.
ROUND TALL FLUSH RIM HOPPER.



M-428. PHILADELPHIA HOPPER.

STYLE	M-426	M-427	M-428
EACH NUMBER IN CRATE COUPLINGS AND SPUDS EXTRA PER SET, NET	5.55 16 .40	3.70 20 .40	2.65 20

### CAR EARTHENWARE.



M-433. HOPPER, AMERICAN PATTERN.



M-434. FRENCH CLOSET BOWL.



M-435. HOPPER, PULLMAN PATTERN.

FIGURE	 	M-433.	M-434.	M-435.
EACH	 	8.70	1 35	10.80



M-440. DRIP PIPE AND PAN.



M-441. CAP, TAB, AND VENT URINAL.



M-442. PLAIN URINAL.

### DRIP PIPES AND PANS.-M-440.

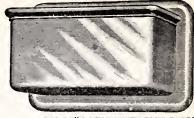
LENGTH OF PIPE	9	16	16½	17	18	20
PER DOZEN		24.00	24.00	24.00	24.00	24.00 45.00

### URINALS.

FIGURE	 M-441.	M-442.
EACH	 8.80	5.10



M-450. SPECIAL "C" TANK.



M-455. SPECIAL"C" TANK WITH TANK BOARD COMBINED.

# SPECIAL "C" SIPHON TANKS.

FIGURE	M-450	M-455
STANDARD SIZE, 17 X 8 X 10, 11/4-INCH FLUSH	7.00	9.00

### SPECIAL "C" JET TANKS.

FIGURE	M-450	M-455
SIZE, 18 X 10 X 10, 11/2-INCH FLUSH	9.00	11.00

The above Tanks are furnished complete with all trimmings, ready to set up. They are carried in stock in Natural or Antique Oak and Light Cherry, cabinet finish. Other woods on short notice.



M-460. LAKESIDE TANK.



M-465. TANK AND PIPE BOARD.

#### LAKESIDE SIPHON TANKS .- M-460.

STANDARD SIZE, 17 X8 X10, 1%-INCH FLUSH, COMPLETE	6.00
LARGE SIZE, 18X10X10, 1%-INCH FLUSH, COMPLETE	7.50
EXTRA LARGE SIZE, 22 X 11 X 10, 11/2-INCH FLUSH, COMPLETE	10.50

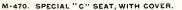
Lakeside Tanks are furnished in Ash only, finished with one coat of Varnish.

#### TANK AND PIPE BOARDS.-M-465.

OAK, NATURAL OR ANTIQUE; CHERRY, LIGHT OR DARK	2.50

In ordering Tank Boards give size of Tank.



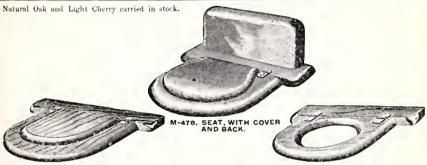




M-471. SPECIAL "C" SEAT.

### SPECIAL "C" SEATS, TO ATTACH TO BOWLS.

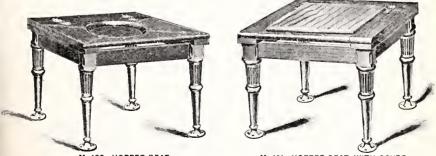
M-470. OAK, NATURAL OR ANTIQUE; CHERRY, LIGHT OR DARK M-471. OAK, NATURAL OR ANTIQUE; CHERRY, LIGHT OR DARK	K	3.50 3.00



M-479, SEAT, WITH COVER.

M-480, SEAT.

FIGURE	M-478	M-479	M-480
OAK, NATURAL OR ANTIQUE, OR LIGHT CHERRY	3.50	3 00	2.00



M-490. HOPPER SEAT.

M-491. HOPPER SEAT, WITH COVER.

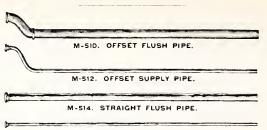
#### HOPPER SEATS.

	M-490. COMPLETE, WITH FOUR HEAVY LEGS, JAPANNED	5.00
ľ	M-491. COMPLETE, WITH FOUR HEAVY LEGS, JAPANNED	6.00

Heavy Legs, japanned, each, 60 cents; galvanized, each, 80 cents; Light, painted, each, 40 cents.

Hopper Seats with Self-Acting Attachments for operating Fore and After Wash Tanks, add to list of Seat, \$1.00.

#### JAMES B. CLOW & SONS, CHICAGO.



M-516, STRAIGHT SUPPLY PIPE.

#### CLOSET FLUSH PIPES.

#### CLOSET SUPPLY PIPES.

SIZE INCHES	18	1 ½	SIZE	INCHES	18	∄ I. P.
OFFSET PIPE, NICKEL PLATED . EACH STRAIGHT PIPE, NICKEL PLATED, EACH	3.00 2.75	4.00 3.25	OFFSET PIPE, NIC STRAIGHT PIPE, N		2.50 2.40	4 75 4 50







M-52D. PIPE STRAP.

M-522. M-524. STRAP, WITH BUFFER. DOUBLE STRAP, WITH BUFFER.

M·525. DOUBLE STRAP.







M-528, PIPE HOLDER.

M-530. DOUBLE PIPE HOLDER.

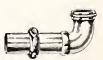
M-535. SPUN FLANGES.

#### PIPE STRAPS, HOLDERS AND SPUN FLANGES, NICKEL PLATED.

SIZE	 INCHES	å I.P.Size	1 I.P.Size	16 Tubing	3 I.P.Size	1 Tubing	t‡ Tubing	If Tubing	14 Tubing	2 Tubing
M-520	 . EACH	. 12	12	.12	15	.15	.20	. 20	.25	
M-522	 . EACH							. 30	.35	
M-524	 . EACH							. 60		
M-525	 . EACH							.30		
M-528	 . EACH			.75				1.00	1.50	
M-530	 . EACH							1.75	2.00	
M-535	 . EACH	12	. 12	. 15	.15	. 15	. 15	.18	.18	.25







M-545, SLIP JOINT.

SIZE	FOR TUBING	1 🖁	1 ½
	O. OFFSET SLIP JOINT, RIGHT OR LEFT, NICKEL PLATED		4.00 2.00



M-550. FLOOR FLANGE.



M-555.
MARBLE FLOOR SLAB.



M-560. FLOOR FLANGE, THREADED.



M-565. LOOSE HEAD SCREW.



M-570. CLOSET PLATE.



M-575.



M-580.

FIGURE	M-550.	M-560.	M-565.	M-570.	M-575.	M-580.
EACH	1 20	2.50	. 06	.03	. 12	.14



M-585. PULL.



M-587. S HOOK.



M-589. SWIVEL.



M-592, OCTAGON.



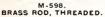
M-594.



M-596. SQUARE.

FIGURE .		M-585. Wood.	M-585. China	M-587.	M-589.	M-592.	M-594.	M-596.
PER DOZE	٧	4 00	6 00	50	4.00	2.40	2.00	2 00







M-600. ROUND HEAD BRASS SCREW.



M-602. BRASS ROD, CONTINUOUS THREAD.

### ROUND HEAD BRASS SCREWS, NICKEL PLATED .- M-600.

SIZE		9 G	uge.		10 Gauge.				12	12 Gauge.				
LENGTH INCHES	3	1	14	1 ½	3 4	1	11	1 1	2	2 1/2	3			
PER DOZEN	. 20	.25	. 30	. 35	. 20	. 25	. 30	. 35	.40	. 50	.75			

M-598, M-602-1-inch Brass Rod, Threaded; any length to order.



NO. 29. 1%-INCH.



NO. 4A. 1%-INCH, FULL LENGTH, 5 INCHES FROM FACE TO BACK.



NO. 6AA. IN-INCH.



M-616. NO. 6A. FOR 2-INCH VENT, TO SLIP OVER 1%-INCH L. P.



M-61B NO. 2B. FOR 2-INCH VENT, TO SLIP OVER 2-INCH I. OR L. P.



M-620. NO.B. FOR 2-INCH VENT, TO SLIP OVER 2-INCH I. OR L. P.

#### RICKETT'S RUBBER CLOSET CONNECTIONS.

NUMBER	29	4 A	6 A A	6 A	28	8
PER DOZEN	7.00	11.00	15.00	15.00	14.00	14.00



#### SUPERIOR RUBBER ELBOWS .-- M-630.

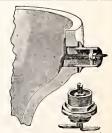
114 X 114 BENT OR STRAIGHT, FOR SUPPLY				PER DDZEN	6.00
14X114 BENT OR STRAIGHT, FOR SUPPLY					9.00
11/4 X 11/4 BENT OR STRAIGHT, FOR SUPPLY					9.00
11/2 X 2 BENT OR STRAIGHT, FOR VENT					12.00
2 X2 BENT OR STRAIGHT, FOR VENT		٠		PER DOZEN	12.00



ROBB COUPLING.



M-640. OHLIGER CONNECTION.



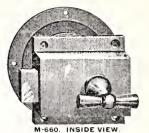
M-645. CLOSET REPAIR COUPLING.

	FIGURE	M-635.	M-640.	M-645. 11-inch.	M-645. 2-inch.
•	PER DOZEN	1.50	1.25	18.00	24.00

## CLOSET AND URINAL STALL TRIMMINGS.



M-660. OUTSIDE VIEW.



W-000. 11131DE V

## CLOSET DOOR INDICATOR BOLT. - M-660.

POLISHED BRASS, COMPLETE WITH SCREWS										EACH	3.00	1
NICKEL PLATED, COMPLETE WITH SCREWS										EACH	3.50	



M-663. DOOR STOP.



M-666. DOOR STOP.



M-669. SPRING HINGE.



M-672, BOXED HINGE.

FIGURE	*M-663	*M-666	M-669	M-672
POLISHED BRASS EACH NICKEL PLATED EACH	2.25	4.00	3.75	4.85
	2.50	4.50	4.15	•5.25

\*With Rubber Buffer.



M-675. ADJUSTABLE LEG.



M-678. STANDARD.



M-681. CLAMP.



M-684. CLAMP

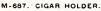
FIGURE	M-675.	M-678	M-681	M-684
POLISHED BRASS . EACH NICKEL PLATED . EACH	7 00	1.35	1 15	1.35
	7.50	1.50	1 25	1.50

M-681. Top and Bottom Clamp for Marble Partition.

M-684. Combination Clamp for Wood Stile and Marble Partition

## CLOSET AND URINAL STALL TRIMMINGS.







M-690. CHAIN GUIDE.



M-693. ANGLE CHAIN GUIDE.

FIGURE		M-687	M-690	M-693
	EACH	.90	85 .90	2 50 2.75



M-696. PLAIN LEG.



M-699. END LEG.



M-702. CORNER LEG.



M-705, HOOK.

FIGURE	M-696	M-699	M-702	M-705
POLISHED BRASS . EACH NICKEL PLATED . EACH	2.60 2.75	4.50 4.75	4 75 5.00	1.10 1.20

Bolts and Screws included in above lists of Urinal Stall Legs.



M-708. URINAL CLAMP.



M-711. R. H. CLAMP.



M-714, CLAMP.



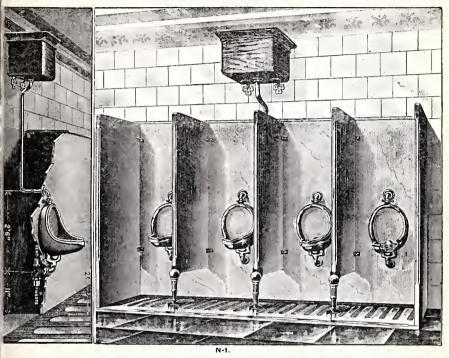
M-717. L. H CLAMP.

FIGURE		M-708	M-711	M-714	M-717
POLISHED BRASS	EACH	1.00	.85 .90	.70 75	. 85 90

When ordering Legs or Clamps state thickness of marble or slate.

# CLOW'S AUTOMATIC SIPHON JET URINALS.

(MADDEN'S PATENT.)



tocludes Siphon Jet Earthenware Lipped Urinals, Round Cornered Cherry or Oak Copper lined Automatic Flushing Tank, Nickel Plated Brass
Tank Supports and Flush Pipe above Marble, Rough Brass Connections back of Stalls, Italian Marble Stalls with Countersunk
Base, Partitions and Ends Polished Both Sides, 7-inch Capping for space back of Stalls, Nickel Plated
Brass Legs, Clamps, Inlet and Outlet Connections

Dimensions of Stalls: Height, 5 feet; width, 2 feet; depth, Ends, 2 feet 6 inches; Partitions, 1 foot 8 inches; thickness, Ends, Partitions and
Back, 4-inch: Base, 14-inches

	-							
Number of Stalls,				1	2	3	4	5
Urinals complete, without Stalls,				<b>\$38.00</b>	\$ 69.00	\$100.00	\$130.00	₹162.00
Urinals with Slate Stalls, complete as shown.	-	-	_	65.50	118 00	170.50	222.00	275.00
Uriuals with Marble Stalls, complete as shown,	-	-		90.00	153.00	216.00	278.00	342.00

Our Automatic Siphon Jet Urinal is similar in principle of construction and operation to the Madden Siphon Jet Closet. (See Sectional on page 254.)
Urinal contains a sufficient hody of water to deodorize urine.

Tank is automatic in operation, discharging its contents into the Urinal nt intervals that can be regulated to suit requirements.

A strong siphonic action through the 2-inch Outlet Pipes, when Tank is discharging, carries into the sewer all Foreign substances thrown into the Bowl, thoroughly cleansing Bowl and Waster Pipes and positively preventing all stoppage—a great advantage over the ordinary type of Urinal.

Flush Pipe and Waste Outlet can be arranged in front of marble, if desired, without extra charge. Tanks can be made to operate with Pull in connection with Automatic Flush.

#### CLOW'S URINAL STALLS.

#### WITH AUTOMATIC FLUSHING TANKS.





N-7.

N-6 includes Marble Urinal Stalls. Partition and Ends Polished Both Sides, Back Polished on One Side, 7-Inch Capping for space back of Stalls,
Base Countreaunk and Grooved, Automatic Copper Lined Flushing Tank with Regulating Valve, Nickel Plated Brass Brackets,
Supply and Flush Pipes extending below Marble, Flat Lipped Earthenware Urinals, Nickel Plated Inlet
Connections, Urinal Traps, Clamps and Bolts, Partition supported on
Nickel Plated Brass Leg.

N.7, same as N.6, with Iron Automatic Tilting Tank with Regulating Valve, Nickel Plated Flush Pipe extending below Marble and Nickel Plated Inlet and Outlet Connections.

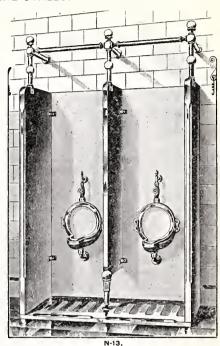
Dimensions of Uriual Stalls. Height, 5 feet; width, center to center, 2 feet; depth. Ends, 2 feet 6 inches; Partitions, 1 foot 8 inches, thickness, Ends, Partitions and Backs, I-inch; Base, 1-i inches.

N-6. Number of Stalls.				3				7	8	9	10
Marble, complete as shown,		<b>\$61.00</b>	\$98,50	<b>\$135.50</b>	\$173.50	\$211.50	\$249.50	\$286.00	8321.00	\$359.00	\$397.00
Slate, complete as shown,	-	48.50	81.00	113.50	146.00	179.00	211.50	244.00	276.50	309.00	342.00
N-7. Number of Stalls, .	-							7	8	9	10
N-7. Number of Stalls, Marble, complete as shown,									8 \$307.00	9 <b>8343.00</b>	10 \$378.00

N-6, with Nickel Plated Outlet Connection, as shown in N-7, deduct \$1.50 per Stall.
N-7, with Nickel Plated Urinal Trap. as shown in N-6, add \$1.50 per Stall.
N-6 or N-7, with Nickel Plated Top Railing, as shown in N-12, add \$0.00 per Stall.
N-6 or N-7, with Nickel Plated Fancy Top Railing, as shown in N-13, add \$10.00 per Stall.

#### CLOW'S URINAL STALLS.





N-13 includes Marble Urinal Stalls. Partition and Ends Polished Both Sides. Back Polished on One Side, 7-inch Capping for space back of Stalls,
Base Countersunk and Grooved, Nickel Plated Brass Top Rail, Flat Lipped Earthenware Urinals, Nickel Plated
Doherty Self-Closing Urinal Cocks and Urinal Traps, Clamps and Bolts, Partition
supported on Nickel Plated Brass Leg.

N-18 includes Marble Urinal Stalls, Partition and Ends Polished Both Sides, Back Polished on One Side, 7-inch Capping for space back of Stalls, Base Countersunk and Grooved, Nickel Plated Fancy Top Rail, Flat Lipped Earthenware Urinals, Nickel Plated Lock Key Urinal Cocks, Outlet Connections, Clamps and Bolts, Partition supported on Nickel Plated Brass Leg.

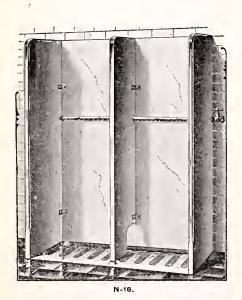
N-12. Number of Stalls,	1	2	3	4	5	6	7	8	9	10
Marhle, complete as shown, .	\$62.00	<b>\$104.00</b>	<b>\$146.00</b>	<b>≵</b> 188.00	<b>\$230.00</b>	<b>*272.00</b>	*314.00	<b>\$356.00</b>	\$400.00	<b>*442.00</b>
Slate, complete as shown,	52.00	88.00	124.00	160.00	196.00	232.00	268.00	304.00	340.00	376.00
Deduct, if without Top Railing,	9.00	14.00	19.00	24.00	29.00	34.00	39.00	44.00	49.00	54.00
N-13. Number of Stalls,	1	2	3	4	5	6	7	8	9	10
N-13. Number of Stalls, Marble, complete as shown,					_			8 \$348.00	9 \$391.00	
		<b>\$1</b> 02.00	<b>\$143</b> .00		\$225.00	\$266.00	*307.00	<b>\$348.00</b>	9 \$391.00 331.00	\$432.00

N-12, fitted with Outlet Connection, as shown in N-13, deduct \$1.50 per Stall.

N-13, fitted with Urinal Trap, as shown in N-12, add \$1.50 per Stall.

If desired, N-12 will be fitted with Lock Key Cock, or N-13 with Self-Closing Cock, without extra charge.

## CLOW'S URINAL STALLS.





N-18 includes Marble Urinal Stalls, Partition and Ends Polished Both Sides, Back Polished on One Side, Base Countersunk and Grooved Cast-Iron Galvanized Gutter and Outlet Connection, Brass Perforated Flush Pipe, Lock Key Cock, Clamps and Bolts.

N-19, same as N-18, with Italian Marble Splash-board, as shown.

Dimensions of Urinal Stalls: Height, 5 feet; width, center to center, 2 feet; depth, Ends, 2 feet; Partitions, 1 foot 8 inches; thickness, Ends. Partitions, and Backs, 7 inch : Base, 11 lnch.

N-18. Number of Stalls,	1	2	3	4	5	6	7	8	9	10
Marble, complete as shown,	\$44.00	\$75.00	\$105.00	<b>\$135.00</b>	<b>\$165.00</b>	\$195.00	\$225.00	\$255,00	<b>\$285.00</b>	\$315.00
Slate, complete as shown,	33.50	55.50	80.50	105.50	130.50	155.50	180.00	205,00	230,00	255.00

N-19. Number of Stalls,	1	2	3	4	5	6	7	8	9	10
Marble, complete as shown,	\$49.50	\$86.00	\$121.50	\$157.00	<b>\$192.50</b>	\$228.00	\$263.50	\$299.00	\$334.50	\$370.00
Slate, complete as shown,										

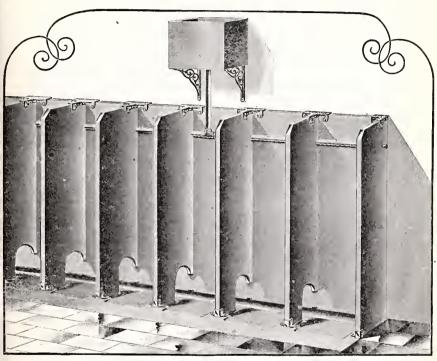
If with Brass Legs, as shown on pages 316 and 317, add \$2.00 per Stall,

If with Brass Top Railing, as shown on N-12, add \$9.00 per Stall.

If with Brass Top Railing, as shown on N-13, add \$10.00 per Stall.

All our Urinal Stalls are set up and carefully examined before shipping.

# CLOW'S SLATE URINAL STALLS FOR SCHOOLS.



N-24.

Includes Slate Urinal Stalls, 1-inch Backs and Partitions, 13-inch Countersunk Base, Galvanized Iron Gutter and Top Clamps, Brass Base Clamps, Automatic Siphon Tank with Galvanized Iron Brackets, Brass Flush and Washdown Pipes.

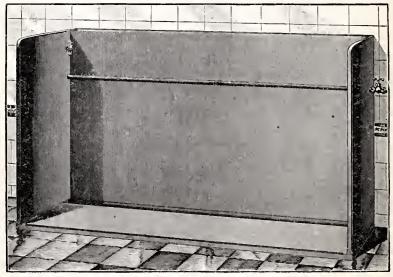
#### DIMENSIONS AND PRICES.

Height of stalls, 41 feet; width of stalls, center to center of partitions, 20 inches; depth, 20 inches; width of base, 26 inches.

Number of Stalls,		_ 2	3	4	5	6	7	8	10	12
Capacity of Tank, gallons,		_ 1	2	3	3	4	4	6	8	8
Price, as described,	-	. \$46.50	\$66.00	\$85.50	\$106.50	\$126.00	*145.50	\$168.50	\$207.50	\$246.50

## CLOW'S SLATE URINAL STALLS.

#### FOR SCHOOLS AND PUBLIC BUILDINGS.



N-29.

Slate Urinal Stall with Galvanized Iron Gutter, Strainer, Waste Connection, Perforated Brass Wash Down Pipe, Loose Key Stop, Clamps and Bolts.

DIMENSIONS.-Height, 4 feet 6 inches; depth, 20 inches; thickness of back and ends, 1 inch, base, 11 inches.

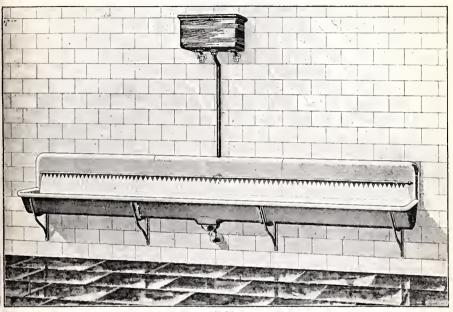
LENGTH	4 feet.	· 6 feet.	8 feet.	10 feet.	12 feet.
PRICE	36.00	52.00	68.00	84.00	100.00

This Stall can be furnished in any length, Single as shown, to go against the wall; or Double with Back in center and Stall on each side.

## CLOW'S AUTOMATIC SIPHON URINAL,

#### FOR SCHOOLS, FACTORIES AND DEPOTS.

(MADDEN'S PATENT.)



N-34.

Includes Enameled Iron Urinal with Enameled Back, Painted Iron Brackets, Automatic Flushing Tank, Brass Flush and Perforated Washdown Pipes and 2-inch Brass Waste Connection,

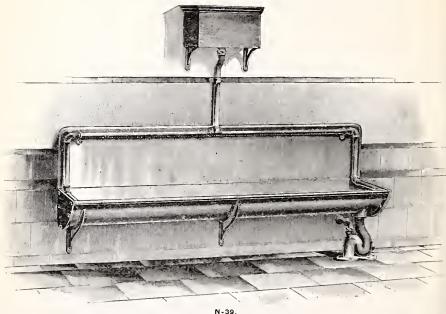
DIMENSIONS—Width, 9½ inches, depth, 7½ inches; height to top of urinal, 24 inches; height to top of back, 33½ inches; Floor to center of outlet, 7½ inches.

LENGTH	ET	5	8	10	12	15
PRICE		55.00	75.00	90.00	110.00	125.00

A thoroughly sanitary urinal trough, especially adapted for Schools, Factories and other Public Buildings. The flush is automatic and can be regulated to operate at any desired interval. At each flush the entire contents of the trough is discharged and every part thoroughly cleansed. Between flushes the trough contains a body of water 3 inches deep, thus preventing the odor common to urinals exposing a dry surface.

The outlet is so constructed that the trough can be set at any required height—a desirable feature not possessed by other makes.

# CLOW'S SECTIONAL AUTOMATIC FLUSHING URINALS.



Includes Iron Urinal with Brass Capping in Front, Back and Brackets, Vented Trap, Oak or Cherry Automatic Flushing Tank and Perforated Wash-Down Pipes.

DIMENSIONS-Height, from floor in front, 26 lnches; back, 36 inches; depth inside, 71 inches; width inside, 9 inches; width, front to back, 12 inches.

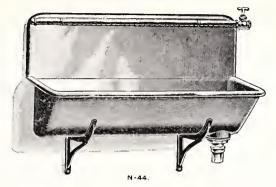
								,			Enameled, with Brass Flush Pipes.	Enameled, with Galvanized Flush Pipes,	Painted, with Galvanized Flush Pipes.
5 feet long,	complete	as	described,	with	3-gallon	Tank,	-	-	_		\$60.00	\$49.00	<b>\$33.00</b>
6 feet long,	4.	44	44	66	3-gallon	Tank,					68.00	57.00	38.00
7 feet long,	4.6	6 6	**	46	4-gallon	Tank,	_				76.50	66.00	43.00
8 feet long,	44	66	44	**	4-gallon	Tank,	_				86.50	73.00	48.00
10 feet long,	44	66	44		5-gallon						98.00	86.50	55.00
12 feet long,	4.6	4 4	44		5-gallon				-		117.00	100.00	62.00
14 feet long,	64	44	44	"	8-gallon	Tank.					132.00	113.50	68.00
16 feet long,	4.6	4 4	4.6		8-gallon		-	-	•	-	147.00	127.00	75.00
18 feet long,	4.6	44	"		10-gallon		•	•	•	•	162.00	140.50	82.00
20 feet long,	44	4 6	+6		10-gallon		-			-	178.00	154.00	88.00
	. 100	, ,							*		210.00	104.00	88.00

If without Trap, deduct, for painted, \$2.50; enameled, \$3.00.

#### ROUGHING-IN MEASUREMENTS.

Allow from wall to center of outlet, 5 inches; end of urinal to center of outlet, 71 inches; center of vent to floor, 101 inches; from end of urinal to face of clean-out screw in trap standard, 4 inches. This must be added to length of urinal.

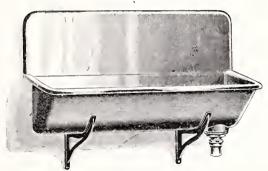
## CLOW'S CAST-IRON PUBLIC URINALS.



Includes Roll Rim Urinal, Back, Brackets, Brass Strainer and Coupling, Perforated Flush Pipe and Loose Key Stop.

#### PRICES.

LENGTH INCHES	24	30	36	42	48	60
PAINTED, WITH GALVANIZED FLUSH PIPE EACH	6.55	7,30	8.30	9.30	10.80	13.30
GALVANIZED, WITH GALVANIZED FLUSH PIPE . EACH	9.50	10.20	11.70	12.50	15.70	22.20
ENAMELED, WITH BRASS FLUSH PIPE . EACH	12 80	14 00	16.00	18.80	20 80	28.00



N-45.

Includes Roll Rim Urinal, Back, Brackets, Brass Strainer and Coupling.

#### PRICES.

LENGTH	HES 24	30	36	42	48	60
GALVANIZED	ACH 4.80	5,30	5.80	6.80	7.80	9.80
	ACH 7.70	8,20	9.20	10.70	12.50	18.50
	ACH 10.55	11,30	12.80	15.30	16.80	23.30

## EARTHENWARE URINALS.





N-67. CORNER LIPPED URINAL.

NUMBER												1	2	3
SIZE											Н	13 x 13 5.85 8.80	$\begin{array}{c c} 11\frac{1}{2} \times 11\frac{1}{2} \\ 4.40 \\ 7.30 \end{array}$	10½ x 10½ 3.95 6.60
N-67 CRATE												12	24	24



N-68. FLAT BACK URINAL.



N-69. FLAT BACK LIPPED URINAL.



N-70. FLAT BACK LIPPED URINAL, WITH HOOD AND VENT.

NUMBER															1	2	3
SIZE .														INCHES	15 x 18	13 x 15	12 x 14
N-68													,	EACH	5.85	4.40	3.95
N-69 .														EACH	8.80	7.30	6.60
N-70														EACH	10.25	8.80	
NUMBER I	N CRA	TE													12	24	24

Approximate weight of crate, 650 pounds.

## ENAMELED IRON URINALS.



N-81. FLAT BACK LIPPED URINAL.



N-82. FLAT BACK LIPPED URINAL, WITH VENTILATING HOOD.

NUMBER		N-81	N-83
SIZE	INCHES	17 x 18	17 x 18
GALVANIZED	. EACH	9.00	10.50
ENAMELED INSIDE AND PAINTED OUTSIDE	. EACH	10.00	11.00



N-83. FLAT BACK URINAL.



N-84. CORNER URINAL.

NUMBER .	 _							1	2
LENGTH OF PAINTED								11	$15\frac{1}{2}$ 1.50
GALVANIZED							EACH	2.00	2.50
ENAMELED .		-					EACH	2.50	3.00

NUMBER	1	2	3
LENGTH OF SIDE . INCHES PAINTED . EACH GALVANIZED . EACH ENAMELED . EACH	8 .90 1.20 1.75	$9\frac{1}{2}$ 1.15 1.70 2.25	11 1.45 2.25 2.75

Can be furnished Enameled all over.



DOUBLE CONNECTION.



N-96.
ROUND CORNER AUTOMATIC TANK.



N-97.
TRIPLE CONNECTION.

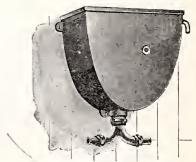
#### AUTOMATIC TANKS.-N-96.

CAPACITY GALLONS	1	2	3	4	5	6	s	10
NUMBER OF HOPPERS TANKS WILL FLUSH NUMBER OF URINALS TANKS WILL FLUSH N-96. OAK OR CHERRY, SINGLE CONNECTION. COMP.	1 7.25	1 2 8.25	2 3 9.25	3 4 11.50	4 5 12.50	5 6 14.50	6 8 16.25	8 12 18.50
PLAIN HARDWOOD TANK, SINGLE CONNECTION. COMP	5.25	6.25	7.25	8 75	9 75	10.75	11.25	13.50

Add to list, for Plain Brass Double Councctions, N-95, 50 cents; Triple Connections, N-97, \$1.00.



N-100. CLOW AUTOMATIC TILTING TANK, SINGLE CONNECTION.



N-101. CLOW AUTOMATIC TILTING TANK, DOUBLE CONNECTION.

No. 1.	1-gallon Flush Tank, with 1-inch Coupling, for 1 Hopper, or 2 Urinals,	-		811.00
No. 2.	3-gallon Flush Tank, with 14-inch Coupling, for 2 or 3 Hoppers, or 3 to 6 Urinals,		-	15.00
No. 3.	5-gallon Flush Tank, with 14-inch Coupling, for 4 or 5 Hoppers, or 7 to 10 Urinals, .			19.00
No. 4.	1-gallon Flush Tank, with 1-inch Double Coupling, for 2 Urinals,			12.50
No. 5.	3-gallon Flush Tauk, with 14-inch Double Coupling, for 2 to 3 Hoppers, or 3 to 6 Urinals,			17.50
No. 6.	5-gallon Flush Tank, with 11-inch Double Coupling, for 4 to 5 Hoppers, or 7 to 10 Urinals,			21.50

Our Automatic Tilting Flushing Tanks are simple in construction, positive in action, and can be regulated to flush as often as needed by simply turning a cock in the Tank to fill tilting bucket in Tank in a given time. They have been used for several years, and give general satisfaction.



\*N-106, URINAL TRAP.



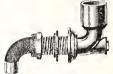
ADJUSTABLE URINAL TRAPS WITH SLIP JOINT.

*N-107.	URINAL	TRAP	WITH	VENT.

FIGURE		N-106	N-107
	EACH EACH	3.10 3.25	3.35 3.50







N-112. LEAD PIPE INLET.

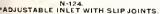
N-113. SLIP JOINT INLET.

N-114. INLET.

N-119. OUTLET.

FIGURE	N-112	N-113	N-114	N-119
POLISHED BRASS . EACH NICKEL PLATED EACH	.75	.75	1.75	2.60
	1.00	1.00	2.00	2.75







N-126. BRASS CLAMP.



N-129. FULLER URINAL COCK.

FIGURE	N-124	N-	126	N-129
FIGURE	14-7-4	No. I	No. 2	14-129
POLISHED BRASS EACH NICKEL PLATED . EACH	$\frac{2.35}{2.50}$	.70 .85	. 55 . 70	2.25 2.50

<sup>\*</sup>These Connections are made tight from front of Stall back. Space back of Stall is unnecessary.





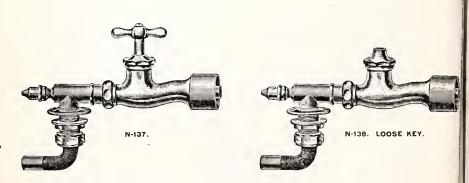


N-135. LOOSE KEY.

## COMPRESSION URINAL COCKS.

FINISH											 ign.								Polished Brass.	Nickel Plated.
N-134 .																PER	00	ZEN	18.00	21.00
N-134 . N-135 . N-136 .														,		PER	-		24.00	27.00
N-136 .	_			٠	-		-		٠							PER	00	ZEN	19.00	22.00

If with Stuffing Box, add to list, per dozen, \$2.00.



# COMPRESSION URINAL COCKS, WITH FLANGE, NUT, AND BENT COUPLING. ADJUSTABLE FLANGE AND UNION.

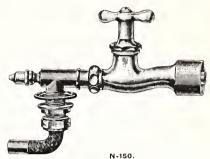
FINISH		Polished Brass.	Nickel Plated.
N-137	PER OOZEN PER OOZEN	46.00 52.00	52.00 58.00

If with Stuffing Box, add to list, per dozen, \$2.00.

# SELF-CLOSING URINAL COCKS.



N-149. URINAL COCK.



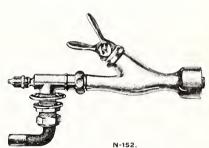
WITH UNION AND ADJUSTABLE FLANGE.

#### BOSTON SELF-CLOSING URINAL COCKS.

FIGURE	 	 	N-149.	N-150.
NICKEL PLATED	 	 PER DOZEN PER DOZEN PER DOZEN	35.00 41.00 3.00	63.00 72.00



N-151. URINAL COCK.



WITH UNION AND ADJUSTABLE FLANGE.

#### DOHERTY SELF-CLOSING URINAL COCKS.

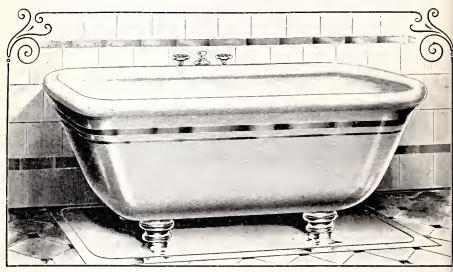
FIGURE	N-151.	N-152.
FINISHED         PER 00ZEN           NICKEL PLATED         PER 00ZEN	35.00 41.00	63.00 72.00

Five feet long,

Five feet six inches long,

## CLOW'S ROYAL PORCELAIN BATHS.

#### GLAZED INSIDE AND OVER THE ROLLED RIM.



P-1.

Includes Royal Porcelain Rolled Rim Bath, Porcelain Legs, Decorated Exterior, White with Gold Bands, finished Nickel Plated Ideal Waste and Overflow, Bell Supply Fittings and Supply Pipes.

#### DIMENSIONS.

Size of Tub,																	5 ft.	51 ft.
Length outside,					_											Inches	60	66
Width outside,								_		-	-	-				Inches	29	30
Width, including	Fix	nre	s,		-				-						_	Inches	33	34
Depth inside,	-					-				-	-			-		Inches	19	19
Class														A		В		c

\$188.00

203.00

\$138.00

148.00

\$108.00

110.00

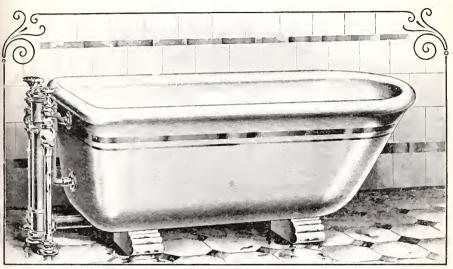
If without Gold Bands, deduct \$6.00.

Italian Marble Countersunk Floor Slah, 14 inches thick, 66 x 39 inches, for 5-foot Bath, \$33.00; 72 x 39 inches, for 5-foot 6-inch Bath. \$37.00

Any style of Exterior Decoration furnished to order.

#### CLOW'S ROYAL PORCELAIN BATHS.

#### GLAZED INSIDE AND OVER THE ROLLED RIM.



P-2.

Includes Royal Porcelain Rolled Rim Bath with Italian Marble Legs, Decorated Exterior, White with Gold Bands, finished Nickel Plated
Ideal Waste and Overflow, Bell Supply Fittings and Supply Pipes.

#### DIMENSIONS.

Size of Tub,				_		-												44 ft.	5 ft.	54 ft.	6 ft.
Length outside,			-					-		-		-	-		_		Inches	54	60	66	7.2
Length, including Fixtures	,			_		-			-								Inches	58	64	70	76
Width outside,										-		-			_	]	Inches	30	30	30	30
Depth inside,		-				-			-		-			-			Inches	19	19	19	19
Class,													-					A		В	С
Four feet six inches long.						-	-											\$188.00	\$13	33.00	\$105.00
Five feet long,																		198.00	13	88.00	108.00
Five feet six inches long.				-		-	-				-					-	-	203,00	1 -	48.00	113.00
Six feet long,	-		-		-			~				-			_			228.00	16	33.00	121.00

If without Gold Bands, deduct \$6.00.

Any style of Exterior Decoration furnished to order.

WHITE ENAMELED. ROLLED RIM.



Includes White Enameled Bath with 42-lach Enameled Rolled Rim, Decorated Exterior, Ivory white with Gold Bands, finished Nickel Plated Shower and Shampoo with Rubber Curtain, Ideal Waste and Overflow, Bell Supply Fittings and Supply Pipes.

Dimensions same as P-10.

WHITE ENAMELED. ROLLED RIM.



P-10.

Includes White Enameled Bath with 48 inch Enameled Rolled Rim, Decorated Exterior, Ivory white with Gold Bands, finished Nickel Plated Ideal Waste and Overflow, Bell Supply Fittings and Supply Pipes.

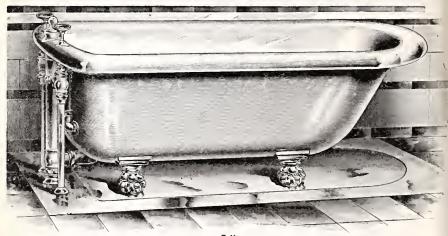
#### DIMENSIONS AND PRICES.

- . 5 ft. 5½ ft. 6 ft.

Size of Tub,

	over mm,	-										Inches	61	67	73
Width	over Rim,											Inches	354	351	354
Width	inside.								-	•	-	Inches			-
	inside,	_	-			-	-		-	-			26	26	26
		-	-		-	-	-	-	-			Inches	19	19	19
Height	on Legs,		-		-		-	-		-	-	Inches	25	25	25
No. 1.	With Plain Fittings	Exterio and Sup	r and oply P	finishe	l Nick	el-plate omplet	ed Wa	iste :	and O	verflo	w, Be	ll Supply	\$75.00	<b>\$</b> 79.00	\$ 84.00
No. 2.	With Deco	rated E	xterior	in Iv	ory-whi	ite and	finis	shed	Nicke	el-plat	ed W	aste, Bell	91.00	95.00	100.00
No. 3.	With Deco	rated E.	terior	in Ivo	ry-whi	te and	Gold	Bar	ids, fii	nished	Nic	kel-plated			100.00
	Waste, I	Bell Supp	oly Fit	tings a	and Su	pply P	ipes 1	o flo	or, all	l com	plete	as shown,	95.00	99.00	104.00

WHITE ENAMELED. ROLLED RIM.

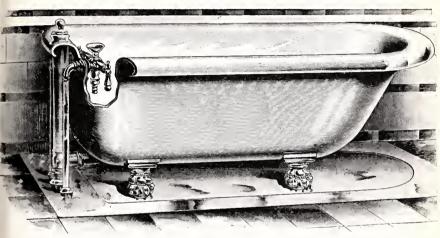


P-11.

Includes White Enameled Bath with 42 inch Enameled Rolled Rim, Decorated Exterior, Ivory white, finished Nickel Plated Ideal Waste and Overflow, Bell Supply Pittings and Supply Pipes,

													1
Size of	Tuh,			_				-			5 ft.	5½ ft.	6 ft.
Length	over Rim,			_		-				Inches	61	67	73
Width	over Rim,	-							-	Inches	35	35	35
Width.	inside		_				_			Inches	251	$25\frac{1}{2}$	251
	inside.		_				_			Inches	181	184	181
	on Legs,				 -	-	-			Inches	24	24	24
No. 1.	With Plain I Supply Pip								Suppl	tings and	\$68.50	873.00	877.50
No. 2.	With Decorat Fittings an				,						84.50	89.00	93.50

WHITE ENAMELED. ROLLED RIM.



P-12.

Includes White Enameled Bath with 4?-inch Enameled Rolled Rim, Decorated Exterior, Iyory-white, finished Nickel Plated Ideal Waste and Overflow, Fuller Double Bath Cock and Supply Pipes.

Size of	Tub,			-	-	-	-			-			5 ft.	$5\frac{1}{2}$ ft.	6 ft.
Length	over l	Rim,										Inches	61	67	73
Width	over R	im,		-								Inches	35	35	35
Width	inside,						-					Inches	$25\frac{1}{2}$	$25\frac{1}{2}$	251
Depth	inside,			-					-			Inches	$18\frac{1}{2}$	18 <del>1</del>	181
Heigh	on Le	gs,										Inches	24	24	24
No. 1.		Plain apply I							er Do		Bath (	Cock and	<b>\$</b> 59.50	\$64.00	<b>\$</b> 68.50
No. 2.		Decor							ated \			er Double	75.50	80.00	74.50
No. 3.		Decoraste, F									Nick	cel-plated	79.50	84.00	78.50

WHITE ENAMELED. ROLLED RIM.



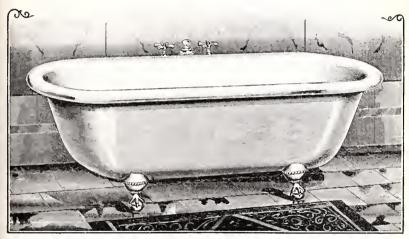
P-21.

Includes White Enameled Bath with 3-inch Enameled Rolled Rim, Decorated Exterior, Ivory white with Gold Bands, finished Nicko
Plated Ideal Waste and Overflow, Bell Supply Fittings, Supply Pipes, and Shampoo and Sprinkler.

Difficulty AND THICES.			
Size of Tub, Length over	Rim 5 ft.	5½ ft.	6 ft.
Width over all,	ches 36	36	36
Width over Rim,	ehes 32	32	32
Width inside,	ehes 26	26	26
Depth inside, Inc	ehes 17	17	17
Height on Legs,	ehes 22½	$22\frac{1}{2}$	221
No. 1. With Plain Exterior, finished Nickel Plated Waste, Bell Supply Fittings, Sup Pipes, and Shampoo and Sprinkler, complete,	* 82.00	<b>\$</b> 86.00	\$ 91.0
Fittings, Supply Pipes, and Shampoo and Sprinkler, complete,	98.00	102.00	107.0
No. 3. With Decorated Exterior, Ivory-white with Gold Bands, finished Nickel Pla Waste, Bell Supply Fittings, Supply Pipes, and Shampoo and Sprink complete as shown,		106.00	111.0

WHITE ENAMELED. ROLLED RIM.



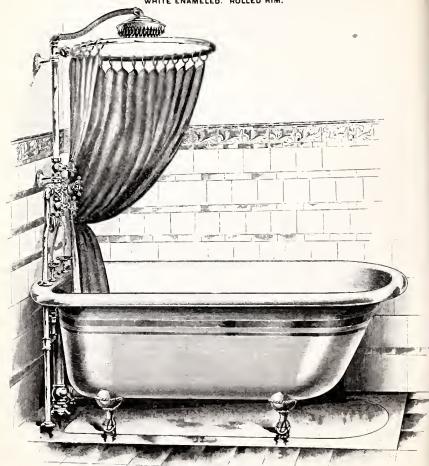


P-22.

Includes White Enameled Bath with 3-inch Enameled Rolled Rim, Decorated Exterior, Ivory-white, finished Nickel Plated Ideal Waste and
Overflow, Bell Supply Fittings and Supply Pipes.

Size of	f Tub,				_			J	Leni	gth	over Rim	5 ft.	5½ ft.	6 ft.
Width	over all,									_	Inches	36	36	36
Width	over Rim,								_		. Inches	32	32	32
Width	inside,										Inches	26	26	24
Depth	inside, .										. Inches	17	17	17
Heigh	t on Legs,	_	_								Inches	221	221	224
No. 1.	With Pla and S										Fittings	<b>*</b> 70.00	\$ 74.00	\$ 79.00
No. 2.	With De										aste, Bell	86.00	90.00	95.00
No. 3.	With De Plated										d Nickel lete,	90.00	94.00	99.00

WHITE ENAMELED. ROLLED RIM.



Includes White Enameled Rolled Run Bath, Rim 3 inches wide on sides and 5 inches wide on supply end, Decorated Exterior, Ivory whit with Gold Bands, finished Nickel Plated Shower and Shampoo with Rubber Curtain, Ideal Waste and Overflow, Bell Supply Fittings and Supply Pipes.

						4 ft.	44 11.	\$135.00	\$140.0
Prices, as described.		-			-	\$128.00	\$131.00	\$100.00	\$140.C

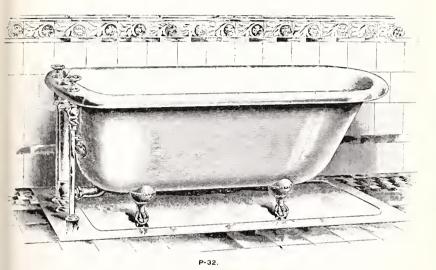
Dimensions same as P-32.

5 ft.

5½ ft.

#### CLOW'S PORCELAIN-LINED IRON BATHS.

#### WHITE ENAMELED. ROLLED RIM.



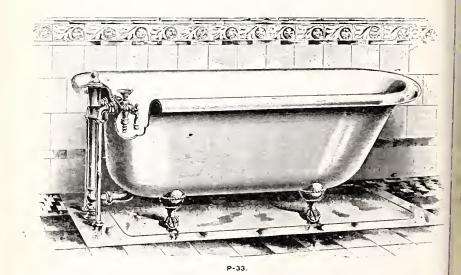
ludes White Enameled Rolled Rim Bath, Rim 3 inches wide on sides and 5 inches wide on supply end, Decorated Exterior, Ivory-white, finished Nickel Plated Ideal Waste and Overflow, Bell Supply Fittings and Supply Pipes.

## DIMENSIONS AND PRICES.

e of Tub,

	-	-		-						-						4 11.	4± 11.	o II.	5± It.
	h over Rim,				-			-							Inches	$52\frac{1}{2}$	624	684	744
	over Rim,					-	-					_			Inches	30	30	30	30
	iuside												_		Inches	24	24	24	24
pth	inside,														Inches	17	17	17	17
igh	t on Legs,				٠									~	Inches	22	22	22	22
). 1.	With Pla	in E	Exter Pip	ior, es,	fini comj	shed plete	Nic	ekel	Plat	ted	Was	te,	Bell	Supply	Fittings	<b>\$</b> 58.00	<b>8</b> 61.00	\$65.00	870.00
. 2.	With De Suppl	corat y Fit	ed E tings	xter and	rior, d Su	Ivor pply	y-wl Pip	hite, es, c	fini omp	she	d N e as	ick sh	el P	lated Wa	ste, Bell	74.00	77 00	81 00	86.00
. 3.	With De Plated	corat Was	ed I ste, I	Exte BeH	rior. Sup	lvo:	ry-w Titti	hite ngs :	wit	h ( Su	Gold pply	B	ands ipes,	finished complet	d Nickel e, .	78.00	81.00	85.00	90.00

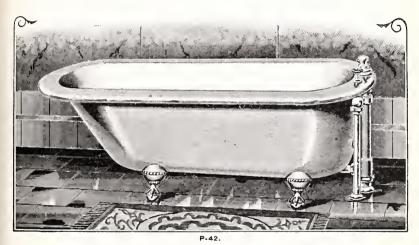
WHITE ENAMELED. ROLLED RIM.



Includes White Enameled Rolled Rim Bath, Rim 3 inches wide on sides and 5 inches wide on supply end, Decorated Exterior, Ivory-wh finished Nickel Plated Ideal Waste and Overflow, Fuller Double Bath Cock and Supply Pipes.

												ı
Size of	Tub, .							4 ft.	4½ ft.	5 ft.	51	
Lengtl	over Rim,	-			-		Inches	523	62	681	7.	
Width	over Rim.			-			Inches	30	30	30	3	
Width	inside, _						Inches	24	24	24	2)	
Depth	inside, .			-			Inches	17	17	17	1	
Height	on Legs,						Inches	22	22	22	2	
No. 1.	With Plair Cock ar					er Doi		<b>\$49.00</b>	\$52.00	<b>\$</b> 56.00	*61	)
No. 2.	With Dee Fuller							65.00	68.00	72.00	27.0	,
No. 3.	With Dece Plated						ed Niekel complete,	69.00	72.00	76.00	810	

#### WHITE ENAMELED. UNDER-ROLL RIM.



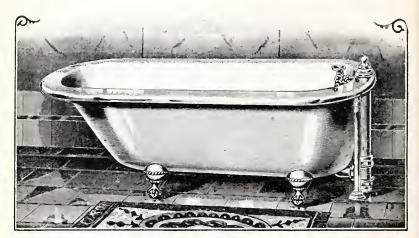
Includes White Enameled Bath with 4-inch Enameled Under-roll Rim, Decorated Exterior, Ivory-white, finished Nickel Plated Ideal Waste

## DIMENSIONS AND PRICES.

and Overflow, Bell Supply Fittings and Supply Pipes.

Siz	e oi	Tu	b,				-		-									-	Le	ng	th	over Rim		5 ft.	5½ ft.	6 ft.
			r Rim	, .		-		-				-	-		-		-		-			Inches	33	33	33	33
Wi	dth	insi	de,		_		-				_											Inches	241	244	244	241
De	pth	insi	de,																			Inches	17	17	17	17
			Legs,									٠.										. Inches		22	22	22
	,	4																								
No	. 1.	W.	ith F	Plain	Ext	teri	or,	fin	ish	ed	Ni	ckel	Pla	ated	ı ı	as	te,	Be	11	Sur	lge	y Fittings				
	in .	4.	aud	Supp	oly F	Pipe	es, c	on	ıple	ete,							-			-	-		<b>865.00</b>	<b>\$</b> 69.00	<b>\$74.00</b>	\$79.00
No	. 2.	W	ith I	)ccor	ated	E	xter	ior	, 1	vor	y-w	hite	, fi	nisl	hed	N	iek	el	Pla	ted	l W	aste, Bell				
	-}	Sp. Sp.	Supp	oly F	ittii	ngs	ane	1 8	up:	ply	Pi	pes,	COL	nple	ete	as	sho	wn	١,		•		81.00	85.00	90.00	95.00
No	. 3.	W	ith I	)eco	rated	E	xte	rio	r, l	voi	ry-1	whit	e w	ith	G	old	Ba	and	ls,	fini	ish	ed Nickel				
			Plate	ed V	aste	e, F	Bell	Su	pp	ly 1	Fit	ting	s aı	nd	Sup	pl	y F	ipε	:8,	cor	np	lete,	85.00	89.00	94.0 <b>0</b>	99.00

WHITE ENAMELED. UNDER-ROLL RIM.



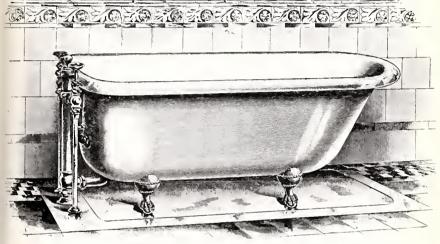
P-43.

Includes White Enameled Bath with 4-inch Enameled Under-Roll Rim, Decorated Exterior, Ivory white, finished Nickel Plated Ideal Was
Fuller Double Bath Cock and Supply Pipes

Size of Tub,	Length over Rim	43 ft.	5 ft.	54 ft	6 f
Width over Rim.	Inches	33	33	33	30
Width inside,	Inches	244	244	244	20
Depth inside, .	Inches	17	17	17	17
Height on Legs,	luches	22	22 .	2.5	25
No 1 With Plain Exterior, finished Nickel Plated W Bath Cock and Supply Pipes, complete, No 2 With Decorated Exterior, Ivory-white, finis Waste, Fuller Double Bath Cock and Supp	hed Nickel Plated	\$56,50	\$60.50	<b>\$65</b> 50	\$70.
as shown.		72.50	76.50	81.50	86.
No 3 With Decorated Exterior, Ivory-white with G- Nickel Plated Waste, Fuller Double Bath					1 2
Pipes, complete,		76.50	80.50	85.50	90 9

WHITE ENAMELED. ROLLED RIM.





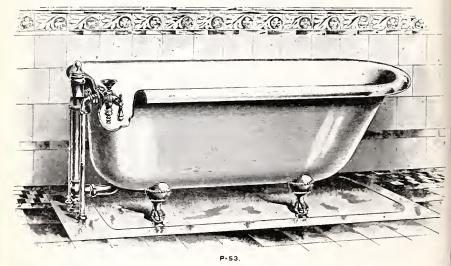
P-52.

Includes White Enameled Bath with 3-inch Enameled Rolled Rim, Decorated Exterior Ivory-white, finished Nickel Plated Ideal Waste and Overflow, Bell Supply Fittings and Supply Pipes.

	·					
	DIMENSIONS AND PRICES.					
	f Tub,	4 ft.	4½ ft.	5 ft.	5½ ft.	6 ft.
Leng	h over Rim,	50	56	62	68	74
Leng	h over all, Inches	54	60	66	72	78
Widt	over Rim, Inches	30	30	30	30	30
Widt	inside, Inches	24	24	24	24	24
Dept	inside, Inches	174	174	171	174	174
Heigh	t on Legs,		23	23	23	23
No. 1	. With Plain Exterior, finished Nickel Plated Waste, Bell Supply					
110. 1	Fittings and Supply Pipes, complete,	\$41.50	<b>*44.00</b>	\$47.00	\$51.00	\$55.50
V- 0					***	***************************************
No. 2	With Decorated Exterior, Ivory-white, finished Nickel Plated Waste, Bell Supply Fittings and Supply Pipes, complete as shown,		54.00	57.00	61.00	65.50
No. 3	. With Decorated Exterior, Ivory-white with Gold Bands, finished					
	Nickel Plated Waste, Bell Supply Fittings and Supply Pipes,					
	complete,	53.50	56.00	59.00	63.00	67.50

#### WHITE ENAMELED. ROLLED RIM

SPECIAL PATTERN



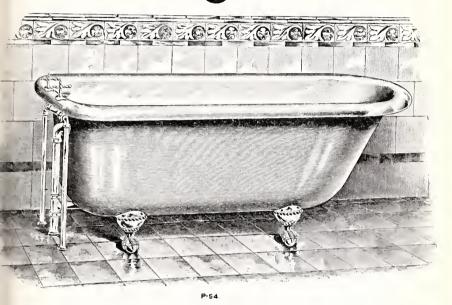
Includes White Enameled Bath with 3 inch Enameled Rolled Rim, Decorated Exterior, Ivory white, finished Nickel Plated Ideal Waste and
Overflow, Fuller Double Bath Cock and Offset Supply Pipes

Size of Tub,	4 ft.	4½ ft.	5 ft.	$5\frac{1}{2}$ ft.	6 ft.
Length over Rim,	50	56	62	68	74
Length over all, Inches	54	60	66	72	78
Width over Rim, Inches	30	30	30	30	30
Width inside, Inches	24	24	24	24	24
Depth inside, Inches	171	174	174	174	174
Height on Legs, Inches	23	23	23	23	23
No. 1. With Plain Exterior, finished Nickel Plated Waste, Fuller Double Bath Cock and Offset Supply Pipes, complete, .	<b>\$35.00</b>	<b>8</b> 37.00	<b>\$4</b> 0.00	<b>*11</b> .00	\$48.50
No. 2. With Decorated Exterior, Ivory-white, finished Nickel Plated Waste, Fuller Double Bath Cock and Offset Sup- ply Pipes, complete as shown.	45.00	47.00	50.00	54.00	58.50
No. 3. With Decorated Exterior, Ivory-white with Gold Bands, finished Nickel Plated Waste, Fuller Double Bath Cock					
and Offset Supply Pipes, complete,	47.00	49.00	52.00	56.00	60.50

69

# CLOW'S PORCELAIN-LINED IRON BATHS.

WHITE ENAMELED. ROLLED RIM.



Includes White Enameled Bath with 3-inch Enameled Rolled Rim, Decorated Exterior, Ivory-white, finished Nickel Plated "Special C" Bath Cock, Supply Pipes and Combined Overflow and Waste with Rubber Stopper.

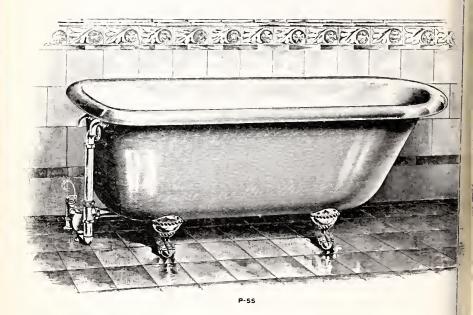
¢ (T) 1						DIM	ENSIO	NS AND PRIC	ES.				
e of Tub,	•	-	-	-	-		-		4 ft.	4½ ft.	5 ft.	5 tft.	6 ft.
igth over Rim,	-	-	-	-	-		-	Inches	50	56	62	68	74
gui over all,	~	-	-	-	-	-	-	Inches	51	57	63	69	75

Width over rim, 30 inches; width inside, 24 inches; depth inside, 17 inches, height on legs, 221 inches.

		Tatellor, Ivory-wille, Nickel Plated "Spe-	00
٥,	3.	cial C" Bath Cock, Supplies and Overflow, complete as shown, With Decorated Exterior, Ivory-white with Gold Bands, Nickel	00
		Plated "Special C" Bath Cock, Supplies and Overflow, complete, 46.00 48.00 51.25 55.00 60	00

WHITE ENAMELED. ROLLED RIM.

SPECIAL PATTERN

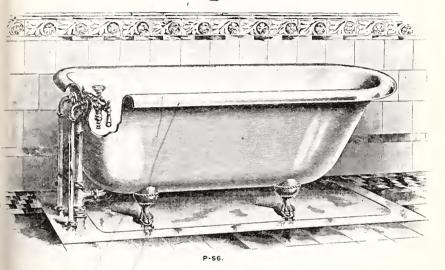


Includes White Enameled Bath with 3-inch Enameled Roifed Rim, Decorated Exterior, Ivory-white, finished Nickel Plated Puller Double Bath Cock and Combined Overflow and Waste with "Special C" Bath Trap

			DIMENSION	IS AND PRI	CES.			
Size of Tub, Length over Rim Length over all,				Inches Inches	4 ft. 50 51	4½ ft. 56 57	5 ft. 62 63	5 <u>1</u> ft. 68 69
	Width over ri	m, 30 inches; width	inside, 24 inch	es. depth ins	ide 17 inc	hes, height on	iegs, 224 inci	hes
		and Nickel Plate Overflow and Was			835.00	837.50	<b>\$</b> 40.50	\$44.00
Double	Bath Cock a	erior, Ivory-white, and Combined Ov	erflow and V	aste with				
Trap, c	omplete as s	hown,			45.00	47.50	50.50	54.00

WHITE ENAMELED, ROLLED RIM.



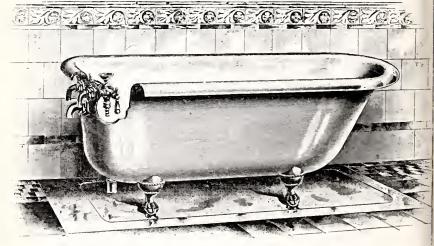


neludes White Enameled Bath with 3-inch Enameled Rolled Rim, Decorated Exterior, Ivory-white, finished Nickel Plated Fuller Double
Bath Cock, Offset Supply Pipes and Combined Overflow and Waste with Rubber Stopper.

DIMENSIONS AND PRICES.																					
size of	Tub,										-						4 ft.	4½ ft.	5 ft.	51 ft.	6 ft.
ength	over R	im,			_											Inches	50	56	62	68	74
ængth	over al	l, .									_					Inches	51	57	63	69	75
	over Ri															Inches	30	30	30	30	30
	inside,															Inches	24	24	24	24	24
	inside,															Inches	171	$17\frac{1}{2}$	174	$17\frac{1}{2}$	$17\frac{1}{2}$
	on Leg															Inches	23	23	23	23	23
																th Cock,					
																	\$29.50	832.00	<b>*35.00</b>	\$39.00	\$43.50
io. 2.	With	Dece	rate	ed :	Ext	eric	or.	Ive	rv-	whi	te.	Ni	cke	l P	late	d Fuller					
																plete as					
								• •									39.50	42.00	45.00	49.00	53.50
√o. 3.	With	Dece	rate	d E	xte	rio	r, I	vor	y-w	hite	wi	th (	Gol	d Ba	nd	s, Nickel					
	Pla	ated	Fnll	er	Do	ubl	e I	Batl	n C	ock	, s	npr	olies	an	ıd (	Overflow,					
		nplet															41.50	44.00	47.00	51.00	55.50

WHITE ENAMELED. ROLLED RIM.





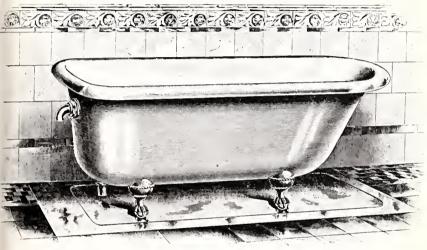
P-57

Includes White Enameled Bath with 3-inch Enameled Rolled Rim, Decorated Exterior, Ivory-white, finished Nickel Plated Fuller Dox Bath Cock, Overflow and Strainer, and Waste Plug with Rubber Stopper.

DIMENSIONS AND PRICES.													
Size of Tub,	4 ft.	4½ ft.	5 ft.	5½ ft.	6								
Length over Rim,	50	56	62	68	7								
Width over Rim, Inches	30	30	30	30	3								
Width inside,	24	24	24	24	2								
Depth inside	174	$17\frac{1}{2}$	$17\frac{1}{2}$	174	1								
Height on Legs, Inches	23	23	23	23	2								
No. 1. With Plain Exterior, Nickel Plated Fuller Double Bath Cock, Overflow and Strainer, and Waste Plng with Rubber Stopper, complete, \$25.00 \$27.50 \$30.50 \$34.50 \$39.  No. 2. With Decorated Exterior, Ivory-white, Nickel Plated Fuller Double Bath Cock, Overflow and Strainer, and Waste Plng with Rubber Stopper, complete as shown,													
No. 3. With Decorated Exterior, Ivory white with Gold Bands, Nickel Plated Fuller Double Bath Cock, Overflow and Strainer, and Waste Plug with Rubber Stopper, complete,	37 00	39.50	42.50	46 50	51 0								

WHITE ENAMELED. ROLLED RIM.





P-58.

Includes White Enameled Bath with 3-inch Enameled Rolled Rim, Plain Exterior, Nickel Plated Overflow and Strainer, and Waste Plug with Rubber Stopper.

#### DIMENSIONS AND PRICES.

													 ,	 						
ize of Tub, .		-	-				_				_					4 ft.	41 ft.	5 ft.	5½ ft.	6 ft.
ength over Rim,				-		-		-					-		Inches	50	56	62	68	74
Vidth over Rim,	-		-		-		_		_						Inches	30	30	30	30	30
Vidth inside, .														-	Inches	24	24	24	24	24
Depth inside,		-			-				_						Inches	17	171	174	174	173
leight on Legs,										-		-			Inches	23	23	23	23	23

No. 1. With Plain Exterior, Nickel Plated Overflow and Strainer, and Waste Plug with Rubber Stopper, complete,

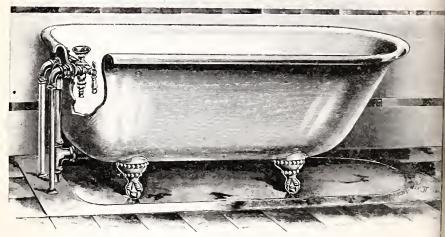
- . \$22.00 \$25.00 \$28.00 \$32.00 \$36.50

With Electro Bronzed or Nickel Plated Iron Legs add \$1.00 each, Polished Brass Legs add \$2.50 each, Nickel Plated Brass Legs add \$3.00 each.

P-58 Bath is not drilled for Bath Cock.

WHITE ENAMELED. ROLLED RIM.

"VERONA."



P-67.

Includes White Enameled Bath with 24-inch Enameled Rolled Rim, Plain Exterior, Nickel Plated Fuller Double Batb Cock, Offset Supp.
Pipes, Combined Overflow and Waste with Rubber Stopper.

#### DIMENSIONS AND PRICES.

Size of Tub,	4 ft.	43 ft.	5 ft.	54 ft	6 f
Length over Rim,	49	55	61	67	73
Width over Rim,	281	284	284	28/	28
Width inside,	24	24	24	24	24
Depth inside, Inches	$17\frac{1}{2}$	174	17 1	17	17
Height on Legs, Inches	23	23	23	23	23
No. 1. With Plain Exterior, Nickel Plated Fuller Double Bath Cock, Supplies and Overflow, complete as shown,	\$27.50	829.75	<b>*</b> 32 00	<b>\$36.00</b>	<b>%40</b> .
No. 2. With Decorated Exterior, Ivory-white, Nickel Plated Fuller Doublo Bath Cock, Supplies and Overflow, complete,	37.50	39.75	42.00	46.00	50.
No. 3. With Decorated Exterior, Ivory-white with Gold Bands, Nickel Plated Fuller Double Bath Cock, Supplies and Overflow, complete,	39.50	41.75	44.00	48.00	52.

WHITE ENAMELED. ROLLED RIM.

"VERONA."



P-68.

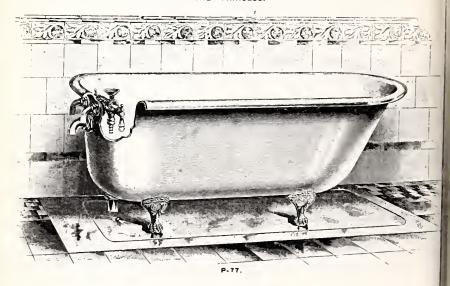
ludes White Enameled Bath with 24-inch Enameled Rolled Rim, Decorated Exterior, Ivory.white, Nickel Plated Fuller Double Bath Cock, Nickel Plated Overflow and Strainer, and Waste Plug with Rubber Stopper.

DIMENSIONS AND PRICES.

e of Tub,	4 ft.	41 ft.	5 ft.	5½ ft.	6 ft.
igth over Rim, Inches	49	55	61	67	73
ith over Rim,	284	284	284	281	281
Ith inside,	24	24	24	24	24
oth inside,	174	173	174	173	173
ight on Legs,	23	23	23	23	23
1. With Plain Exterior, Nickel Plated Fuller Double Bath Cock, Overflow and Strainer, and Waste Plug with Rubber Stopper, complete,	<b>\$22.75</b>	\$25.00	\$27.50	<b>*</b> 31.25	\$36.00
2. With Decorated Exterior, Ivory white, Nickel Plated Fuller Double Bath Cock, Overflow and Strainer, and Waste Plug with Rubber Stopper, complete as shown,	32.75	35.00	37 50	41.25	46.00
3. With Decorated Exterior, Ivory-white with Gold Bands, Nickel Plated Fuller Double Bath Cock, Overflow and Strainer, and					
Waste Plug with Rubber Stopper, complete,	34 75	37 00	39 50	43.25	48.00

ENAMELED. SEMI-ROLLED RIM.

THE "PRINCESS."



Includes Enameled Bath with 14-inch Semi-Rolled Rim, Decorated Exterior, Ivory-white, Fuller Double Bath Cock, finished Nickel Philocorphow and Strainer, and Waste Plug with Rubber Stopper.

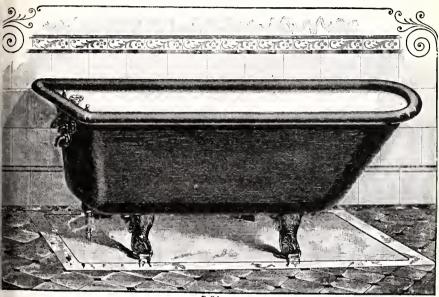
#### DIMENSIONS AND PRICES.

Size of Tub, .					-								4 ft.	4½ ft.	5 ft.	5½ ft.	€
Length over Rim,												Inches	50	56	62	68	1.61
Length over all,												Inches	52	58	64	70	- 11
Width over Rim,												Inches	274	274	271	274	14
Width inside,												Inches	24	24	24	24	1
Depth inside, .												Inches	17	17	17	17	
Height on Legs,												Inches	22	22	22	22	1
No. 1. With Plai	n Ext	erior,	Fulle	r Dou	ble I	Bath (	Cock	, Ni	cke	Pla	ted	Overflow					1
and St	rainer	, and	Wast	e Plu	g wit	th Ru	ibber	Sto	ppe	r, ce	omp	lete, .	\$22.75	825 00	\$27.50	<b>\$31.25</b>	<b>\$300</b>
No. 2. With Dec Nickel												h Cock, Rubber					
Stoppe	r, con	plete	as sh	own,									32.75	35.00	37.50	41.25	400
																	1

This illustration shows our "Princess" Tub, specially designed for Apartment Houses.

The "Princess" Tub can be furnished with fixtures as shown on preceding pages.

WHITE ENAMELED. ROLLED WOOD RIM.



cludes White Enameled Bath, Oak or Cherry Rim, No. 44 Nickel-plated Fuller Double Bath Cock, Shampoo Sprinkler, Nickel-plated Overflow and Strainer, Waste Plug, and Rubber Stopper

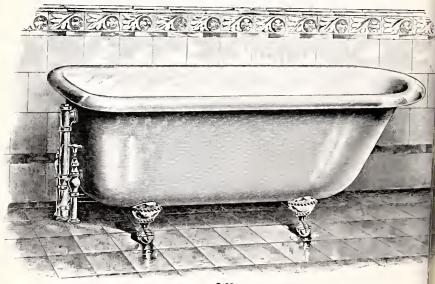
DIMENSIONS	AND	PRICES
------------	-----	--------

	Tub,		-	-					_	_		4 ft.	4½ ft.	5 ft.	51 ft.	0.0
ngtl	h over Ri	m.									Inches		-		-	6 ft.
	over Rin			-	-	-	•	-		-		53	59	64	70	76
		η, -		-	-			-			Inches	28	28	28	28	28
	inside,		-		-	-					Inches	19	19	19	19	19
igh	t on Legs										Inches	27				
			_				-	-	•	•		~1	27	27	27	27
. 1.		Plain	Exter	ior, (	)ak or	· Che	rry Ri	m, N	ickel-	plated	No. 41					P
27,14	Full	er Do	able I	Bath	Cock,	comp	lete a	shov	vn.	•		\$25.00	\$27.25	\$29.75	\$32.50	Ane
						_				•		₩₩0.00	Φ. 1 . 2.0	023.13	Ф32.30	<b>\$</b> 35.50
. 2.	With	Decor	ated 1	Exter	ior in	Ivor	y-whit	te, O	ak or	Chei	ry Rim,					
	Nicl	tel-pla	ted N	0. 41	Fulle	r Dou	ble B	ath C	oek, c	omnle	ete .	35.00	37.25	39.75	42.50	45.50
. 3.												00.00	01.20	09.13	42.30	45.50
. 0.		Jecora	ted E	xterio	or in I	vory-v	white	and (	Gold 1	Bands	, Oak or					
	Chei	ry Ri	m, Ni	ckel-	plated	No.	41 Fu	iller 1	Doubl	e Bat	h Cock,					
	com	plete,			•							20 00	00.00			
				-	-	-	-	-	-	-		37.00	39.25	41.75	44.50	47.50
W	ith Elec	tro-bro	onzed	or 1	Vickel.	nlata	d Iron	T.0	to an	A 41	۸ ا	Dallah ad 3	D #	22.0-		

or Nickel-plated Iron Legs add \$1.00 each, Polished Brass Legs add \$3.00 each, Nickelted Brass Legs, add \$3.50 each.

WHITE ENAMELED. ROLLED RIM.

FOR HOSPITALS, ASYLUMS, SANITARIUMS AND PUBLIC BATHS.



P-95.

Includes White Enameled Bath with 3-inch Rolled Rim, Plain Exterior, finished Nickel Plated Combined Waste and Overflow, Bell Sply Fittings with Loose Keys, and Supply Pipes.

DIMENSIONS	AND	PRICES.
------------	-----	---------

						01111	L14310	NO AND FR	ICES.			
Size of Tub,	-					-			4 ft.	41 ft.	5 ft.	5½ ft.
Length over Rim,	-		-	-	-	-	-	Inches	50	56	62	68
Length over all,						-	_	Inches	54	60	66	72
Width over Rim,		-		-				Inches	30	30	30	30
Width inside, .								Inches	24	24	24	24
Depth inside,	-				-			Inches	17	17	17	17
Height on Legs,							-	Inches	$22\frac{1}{2}$	221	224	223
Price, as described,	-								<b>\$35.00</b>	\$37.00·	<b>\$40.00</b>	\$44.00

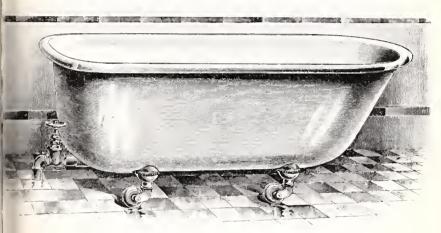
If with 2-iuch combined Overflow and Waste, add \$3.00; If with Rough Brass Fittings, deduct \$3.00.

The Supply Fixtures, having Removable Key, can be operated only by the attendant. Any of our Freuch Pattern Tubs can be furnished with fixtures as shown.

### CLOW'S PORTABLE IRON BATHS.

WHITE ENAMELED. ROLLED RIM.

FOR HOSPITALS AND ASYLUMS.



P-96.

Includes Portable Enameled Iron Bath with \*24 inch Enameled Rolled Rim, Rough Brass Valve and Rubber Tired
Wheels. Painted one cost outside,

#### DIMENSIONS AND PRICES.

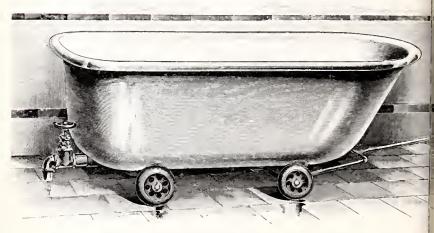
of Tub, gth over Rim.	-				-		-		-			4 ft.	4½ ft.	5 ft.	5½ ft.	6 ft.
th over Rim.	-	-				-		-			Inches	49	55	61	67	73
th inside.	-	-	-		-		-		-	-	Inches	$28\frac{1}{2}$	$28\frac{1}{2}$	284	281	281
e, complete as de	corib	.a -		-		-		-			Inches	171	17±	17 1	$17\frac{1}{2}$	171
-,	SULIDI	cu,	-		*		-			-		\$41.00	\$43.00	**************************************	\$50.00	\$54.50

<sup>\*</sup>P-96 Hospital Bath furnished with Rim 3 inches wide, when so ordered, without extra charge.

### CLOW'S PORTABLE IRON BATHS.

WHITE ENAMELED. ROLLED RIM.

#### FOR HOSPITALS AND ASYLUMS.



D. 01

Includes Portable Enameled Iron Bath with \*2}-inch Enameled Roll Rim, Rough Brass Valve, Rubber Tired Wheels and Hardle. Painted one coat outside.

#### DIMENSIONS AND PRICES.

Size of Tub, Length over Rim,				Inches	4 ft. 49	4½ ft. 55	5 ft. 61	5½ ft. 67
Width over Rim,				Inches	$28\frac{1}{2}$	$28\frac{1}{2}$	281	281
Depth inside, Price, complete as described,		-		Inches	17½ 845.50	17½ \$48.00	17½ 851.00	17½ \$54.50

<sup>\*</sup> P-97 Hospital Bath furnished with Rim 3 inches wide, when so ordered, without extra charge.

WHITE ENAMELED. ROLLED RIM.



ludes White Enameled Sitz Bath with 21-inch Enameled Rolled Rim and Extension, Decorated Exterior, Ivory-white, finished Nickel Plated Ideal Waste and Overflow, Bell Supply Fittings and Supply Pipes

## DIMENSIONS. PRICES.

Width over rim, 30 inches; front to back over rim, 271 inches, height from floor to top of rim, front 15 inches, back 20 inches

1.	With Plain Exterior and Nickel Plated Fixtures, complete,	\$57.50
2.	With Decorated Exterior, Ivory-white, and Nickel Plated Fixtures, complete as shown,	67.50
3	With Decorated Exterior Ivory-white with Gold Bands and Nickel Plated Fixtures complete	69.50

#### CLOW'S PORCELAIN-LINED IRON FOOT BATH.

WHITE ENAMELED. ROLLED RIM.



cludes White Enameled Foot Bath with 2+ inch Enameled Rolled Rim, Decorated Exterior, Ivory white, finished Nickel Plated Ideal Waste and Overflow, Bell Supply Fittings and Supply Pipes

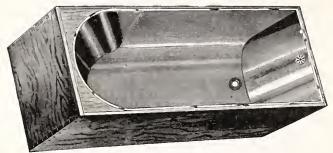
DIMENSIONS.

idth inside, 18 inches; front to back inside, 15 inches, depth inside, 10 inches, width over rim, 224 inches, front to back over rim, 194 inches; front to back over all, 23 inches, height from floor to top of rim, 144 inches

PR		

o. 1. With Plain Exterior and Nickel Plated Fixtures, complete. \$40.50
o. 2. With Decorated Exterior, Ivory-white, and Nickel Plated Fixtures, complete as shown, 48.50
o. 3. With Decorated Exterior, Ivory-white with Gold Bands, and Nickel Plated Fixtures, complete, 50.50

### COPPER BATH TUBS.

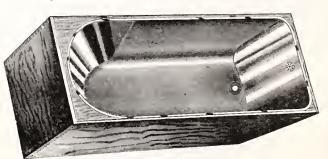


P-124. REGULAR PATTERN.

Outside width of Tubs at head and foot, 24 inches, outside depth of Tubs, 19 inches; outside length of Tubs, 4½, 5, 5½, and 6 feet.

Weight of Copper, 10 oz. 12 oz. 14 oz. 16 oz. 18. Price each any length as above. \$9.25 \$10.00 \$11.00 \$12.50 \$15.00									
	Weight of Copper.				. 10 oz.	12 oz.	14 oz.	16 oz.	18
	Price, each, any length as above,				<b>\$9.25</b>	\$10.00	\$11.00	*12.50	8130

Zinc Tubs, 5, 5½, or 6 feet, \$7.00 each.
Smaller size Bath Tubs to order, usually no extra charge.
Larger size Bath Tubs to order, of Copper, 12 ounce and heavier.



P-125. FRENCH PATTERN.

Outside width of Tubs at head and foot, 264 inches; outside depth of Tubs, 22 inches.

## STEEL CLAD BATH TUBS.

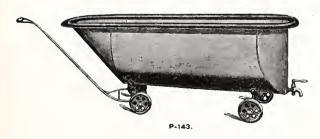


P-134.

### AMERICAN PATTERN-CONNECTED WASTE AND OVERFLOW.

SIZE	4½ ft.	5 ft.	5½ ft.	6 ft.
COPPER-LINED, 12-OZ.		25.50	26.50	28.50
COPPER DEPOSIT (DUPLEX)	15.00	16.00	17.00	11111
ALL STEEL, ENAMEL PAINTED	19.50	20.50	21.50	24.50

### STEEL PORTABLE BATH.



Steel Clad Bath, Copper-Lined, Rubber Tired Wheels, Polished Wood Rim and Brass Faucet.

Sizes- $4\frac{1}{2}$  ft., 5 ft.,  $5\frac{1}{2}$  ft., and 6 ft.

COPPER-LINED	 EACH	36.00
ALL STEEL, ENAMEL PAINTED	 EACH	30.00

## CLOW'S COMBINATION NEEDLE SHOWER BATH AND RECEPTOR.



Nickel Plated Combination Needle Shower Bath with Rubher Curtains, Enameled Iron Receptor, Nickel Plated Strainer, Waste and Coup.

DIMENSIONS—Total height, 7 feet 10 inches; diameter of Needle Bath, 38 inches, diameter of Shower, 8 inches; Receptor, 42 inches square; height, 13½ inches; depth, 6 inches

								<b>\$169.5</b>
Price, complete as described,						•		£10510
If with zinc white finish outside, add						-		20

## CLOW'S SHOWER BATH AND RECEPTOR.



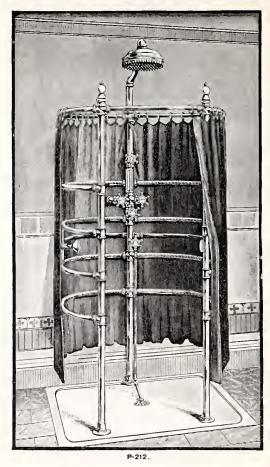
P-206.

Nickel Plated Shower Bath with Rubber Curtain, Enameled Iron Receptor, Nickel Plated Strainer, Waste and Coupling.

DIMENSIONS-Total height, 7 feet 6 inches; diameter of Ring, 23 inches; diameter of Shower, 8 inches.

Receptor, height, 134 inches; depth, 6 inches.

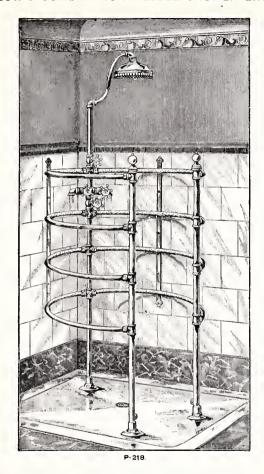
section and an extension of the section of the sect														
rice, complete with 36-inch Receptor,														\$68.00
rice, complete with 42-inch Receptor,				-										76.00
with zinc white finish ontside, add														5.00



Nickel Plated Combination Needle Shower Bath, Liver Spray, Bidet and Thermometer, Rubber Curtains, Nickel Plated Strainer, We and Couplings

DIMENSIONS-Total height, 7 feet 6 inches; diameter of Needle Bath, 41 inches, diameter of Shower, 8 inches.

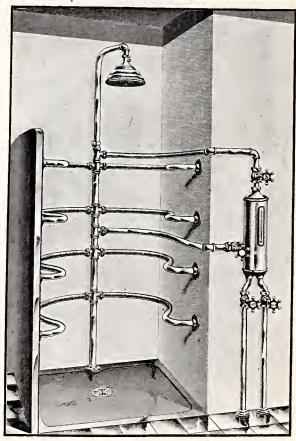
Price, complete as described,	_			_	_	8146
If with Marble Base 4 feet by 3 feet 9 inches, add						32
If with Mixing Chamber, add						25



Nickel Plated Combination Needle Shower Bath Strainer. Waste and Coupling

DIMENSIONS-Total height, 7 feet 6 inches, diameter of Needle Bath, 38 inches, diameter of Shower 8 inches.

rice, complete as described.								-	<b>\$103.00</b>
with Marble Base 45 inches square	e, a	dd						-	32.00
with Mixing Chamber, add .									25 00

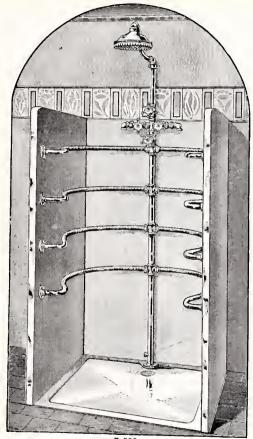


P-224.

Nickel Plated Combination Needle Shower Bath with Nickel Plated Mixing Chamber, Thermometer, Strainer, Waste and Coupling

DIMENSIONS—Total height, 7 feet 6 inches; diameter of stall inside, 36 inches; shower, 8 inches; lateral distance
from wall to center of shower, 19 inches.

Price, complete,	\$100	0
State Stall, 61 feet high, 38 inches wide, 36 inches deep, 11-inch base and 16-inch front for Mixing Chamber, add	69	Q
Marble Stall, size as described above, add	100	Ю
If with Nickel Plated Curtain Rod Rings and Rubber Curtain add	145	0



P-230.

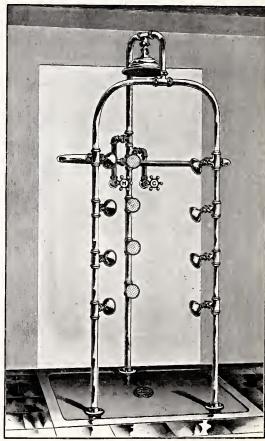
Nickel Plated Combination Needle Shower Bath, Strainer, Waste and Coupling.

\*\*AENSIONS-Height, 7½ fect; diameter of Stall inside, 36 inches; Shower, 8 inches; lateral distance from wall to center of Shower, 19 inches.

ce, complete less Stall.						
te Stall, 6½ feet high, 38 inches wide, 36 inches deep, 1½ inch Base, add	•		٠	-	-	<b>\$</b> 63.00
size as described above and	•					60.00
with Nickel Plated Curtain Rod, Rings and Rubber Curtain, add						95.00
and Rubber Curtain, add	-					12.50

## CLOW'S COMBINATION SHOWER BATHS.

FOR HOSPITALS.



P-236

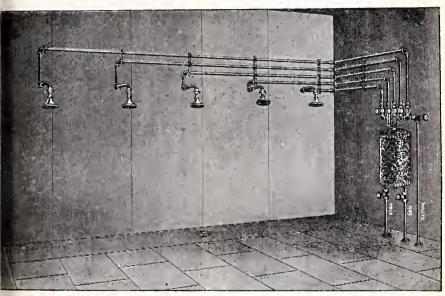
Nickel Plated Combination Needle Shower Bath. Overhead Shower with Inlet Air Valve and Removable Face, 12 Side Showers with Removale Faces and Adjustable Ball Joints, Strainer, Waste and Coupling.

Marble Base, extra; prices upon application.

DIMENSIONS,—Total height, 7 feet 6 inches, diameter of shower, 8 inches, diameter of ring 35 x 40 inches; diameter of side showers, 4 inches

### CLOW'S RANGE SHOWER BATH.

FOR BARRACKS, HOSPITALS, PRISONS AND PUBLIC BATHS.



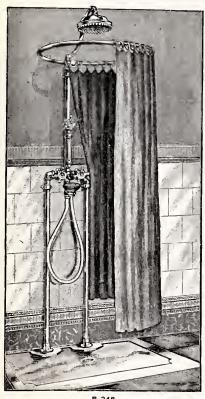
P-242.

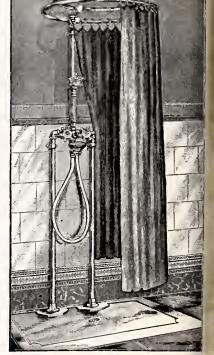
lange Shower, consisting of Five Nickel Plated Showers with Removable Faces and Adjustable Ball Joints, Galvanized Iron Mixing Chamber with Thermometer, Nickel Plated Valves for Supply, Waste and Showers, and Combination Brass Floor Drain and Trap, as shown on page 373.

DIMENSIONS-Length of mixing chamber, 30 inches; diameter, 16 inches; diameter of showers, 5 inches,

This Range can be furnished with any number of Showers. Prices of combinations other than the one illustrated, and for Marble or slate Stalls, given upon application.

These Showers can be arranged in separate stalls or rooms, if desired, the temperature of all being controlled by the one Mixing hamber.





P-248.

P-249.

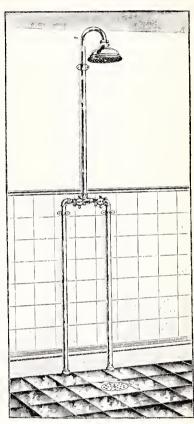
Nickel Plated Shower and Shampoo with Rubber Curtain, Nickel Plated Thermometer, Strainer, Waste and Coupling.

DIMENSIONS-Total height, 7 feet 6 inches; distance from wall to center of shower, 18 inches; diameter of shower, 8 inches; diameter of shower ring, 18 inches; diameter of curtain ring, 25 inches.

P-248.	Complete,								-				-		846	10
P-249.	Complete,					-						-			46	50
	Marble Base	, 30 x	26 in	iches,	coun	tersun	k 4-in	ich de	ep, ex	tra						



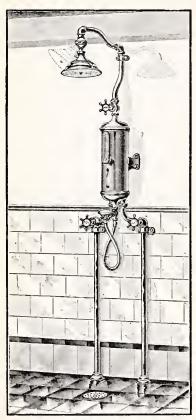




P-261.

Νi	ckel	Plated	Plain S	Shower,	with	Inlet	Air	$V_{\varepsilon}$			
	Sup	ply Pi	pes and	Valves,				-	-	\$18.0	)(
ĺĹ	with	Nicke	l Plated	l Floor	Drain	, add				3.0	)(

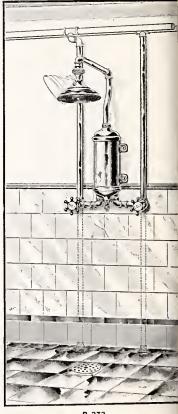
DIMENSIONS—Total height, 7 feet 6 inches; distance from wall to center of shower, 18 inches; diameter of shower, 8 inches; diameter of curtain ring, 25 inches.



P-267.

Ni	ickel Plated Shower wit Removable Face, Adjusts Chamber, Thermometer	ıb	le B	all	Joi	nt,	Mi	xing	
	Waste and Coupling,								
l f	with Galvanized Iron								
	Supply Pipes, deduct	-	-	+	-	•	•	•	8.0
lſ	without Shampoo, deduct		-				-		5.0

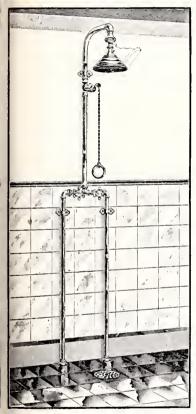
DIMENSIONS—Total height, 7 feet 6 inches; diameter of shower, 5 inches.



P-273

- Niekel Plated Shower with Inlet Air Valve and Removable Face, Adjustable Ball Joint, Mixing Chamber, Supply Pipes to Main Supply above, Strainer, Waste and Coupling,
- If with Galvanized Iron Mixing Chamber and Supply Pipes, deduct . .

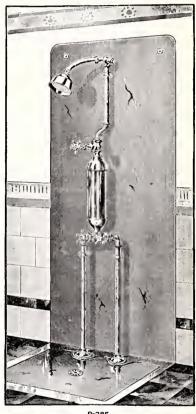
DIMENSIONS—Diameter of shower, 5 inches; distantion supply valves to top of supply pipes, 3 feet 6 inches. Supply pipes to floor if preferred.



P-279.

Niek	el	Plated	Showe	r with	Inlet	Air	Va	lve	and	
			Face. lve, Ch							
f w	th	Niekel	Plated	Floor 1	Drain,	add				3.0

DIMENSIONS-Total height, 7 feet 6 inches; distance from wall to center of shower, 18 inches; diameter of shower, 5 inches.



P-285.

Nickel Plated Shower with Adjustal	ole Swi	ng Jo	int	,
and Mixing Chamber,				\$25.00
If with Thermometer, add				8.00
Marble Base, 30 x 26 inches, cour	itersui	ık ½-	incl	h
deep, extra,				10.00
If with Nickel Plated Floor Drain,	add .			. 3.00

DIMENSIONS-Total height, 7 feet 6 inches; distance from wall to center of shower, 18 inches; diameter of shower, 5 inches.



Diameter of shower, 64 inches, diameter of curtain ring, 25 inches.



If with Rubber Curtain, add

P-293. Nickel Plated Shower with Supply Pipe, Diameter of shower, 64 inches.

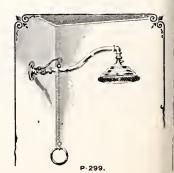


Niekel Plated Ring Shower, . . . . Diameter, 20 inches. Inlet for 1-inch iron pipe.



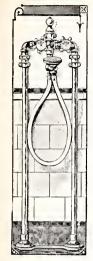
Niekel Plated Shower with Inlet Air Valve and Removable Face, self-closing Valve, Chain and

DIMENSIONS-Distance from ceiling to bottom of shower, 20 inches; diameter of shower, 64 inches.



Niekel Plated Shower with Inlet Air Valve and Removable Face, self-closing Valve, Chain and

DIMENSIONS—Distance from wall to center of shower, 18 i diameter of shower, 6; inches.



P-305 SHAMPOO, WITH HOSE AND SPRINKLER.

ickel Plated, \$14 00



P-308. SHOWER RING, WITH HOSE.

Nickel Plated, - \$1.50



SHAMPOO SPRINKLERS.



Diameter, 31 inches.

Nickel Plated, . . each, \$1.00 Nickel Plated, . . each, \$0.75 Diameter, 31 inches.



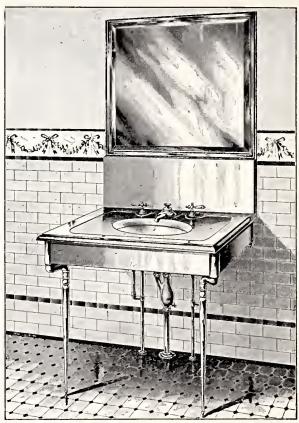
SHAMPOO, WITH THERMOMETER, HOSE AND SPRINKLER.

ickel Plated, \$14.00 without Thermometer, 9.00



COMBINATION FLOOR DRAIN AND TRAP.

Polished Brass, . . . . each, \$7.00 Nickel Plated, . . . . . each, 8.00



R-1.

Italian Marble Slab, 24 x 32 inches, 14 inches thick, 14-inch Back, 5-inch Apron, 15 x 19 Oval Basin, Beveled Plate Glass Mirror, 30 x 32 inches, with Nickel Plated Frame, "Corinthian" Combination Supply and Waste with Ivory Handles, Supply Pipes with Air Chambers, Trap with Veut, Recessed Legs and Apron Supports.

Price, as described,

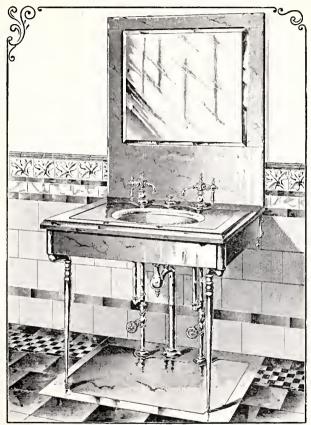
- 875.

This Lavatory can be furnished in any American or Foreign Marble, Onyx or Jasper, and in any size required.

Our Marble is carefully selected and highly fluished.

We have recently organized a Lavatory Department, wherein all Lavatories are set up and every part fitted and thoroughly inspect before shipment.

Soap Cups, Towei Racks and other Bath Room and Lavatory Trimmings shown on pages 462-465.



R.A

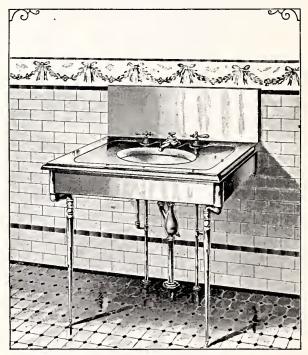
lian Marble Slab 22 x 32 inches, 14 inches thick, 14-inch back, 5-inch Apron, 15 x 19-inch Oval Basin, Beveled Plate Glass Mirror, 24 x 25 inches, with Italian Marble Frame, Nickel Plated Ideal Basin Waste, No. 4 Fuller Basin Cocks, Recessed Legs with Apron Holders, Ideal Trap and Supply Pipes with Air Chambers and Stop Valves. Price, as described,

\$62.00 8.00

Add for countersunk Italian Marble Floor Slab, 22 x 32 inches, 11 inches thick,

This Lavatory can be furnished in any American or Foreign Marble, Onyx or Jasper, and in any size required.

Our Marble is carefully selected and highly finished. We have recently organized a Lavatory Department, wherein all Lavatories set up and every part fitted and thoroughly inspected before shipment.



R-15

R-15. Italian Marble Slab, 24 x 32 inches, 1½ inches thick, 14-inch Back, 5-inch Apron, 15 x 19 Oval Basin, Nickel Plated "Corinthian" Combination Supply and Waste with Ivory Handles, Supply Pipes with Air Chambers, Trap with Vent, Recessed Legs and Apron Support. Price, as described,

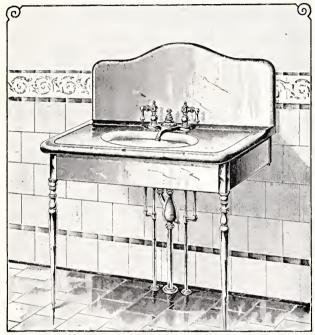
R-16. Complete as described, with Right Hand End, \$50.00; R-17, with Left Hand End, \$50.00.

This Lavatory can be furnished in may American or Foreign Marble, Onyx or Jasper,

Our Marble is carefully selected and highly finished.

We have recently organized a Lavatory Department, wherein all Lavatories are set up and every part fitted and thoroughly insped before shipment.

Soap Cups, Towel Racks and other Bath Room and Lavatory Trimmings shown on pages 462-465.



R-22.

R-22. Italian Marble Slab, 24 x 32 inches, 14 inches thick, 14-inch Back, 5-inch Apron, 15 x 19 Oval Basin, Nickel Plated Combination Supply and Waste, Supply Pipes with Air Chambers, Trap with Vent, Legs and Apron Supports. Price, as described, \$52.00

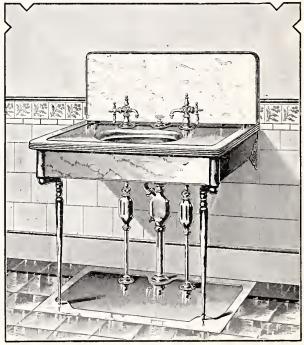
R-23. Complete as described, with Right Hand End, \$52.00; R-24, with Left Hand End, \$52.00.

This Lavatory can be furnished in any American or Foreign Marble, Onyx or Jasper

Our Marble is carefully selected and highly finished.

We have recently organized a Lavatory Department, wherein all Lavatories are set up and every part fitted and thoroughly inspected before shipment.

Soap Cups, Towel Racks and other Bath and Lavatory Trimmings shown on pages 462-465.



R-29.

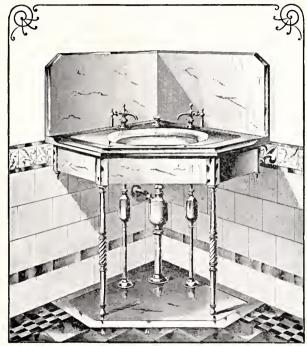
R-29.	Italian Marble Slab 22 x 32 inches, 11 inches thick, 14-inch Back, 5-inch Apron. 15 x	19-inch	Oval Ba	asin,	
Ni	ckel Plated Ideal Basin Waste, No. 4 Fuller Basin Cocks, Recessed Legs with Apron	Holders,	Trap	with	
M.	aste, and Supply Pipes with Bell Air Chambers. Price, as described,			. 84	5.00
R-30.	Complete as described, with Right Hand End,			. 4	5.00
R-31.	Complete as described, with Left Hand End,			. 4	5.00
	Add for countersunk Italian Marble Floor Slab, 22 x 32 inches, 14 inches thick, .				8.00

This Lavatory can be furnished in any American or Foreign Marble, Onyx or Jasper, and in any size required.

Our Marble is carefully selected and highly finished.

We have recently organized a Lavatory Department, wherein all Lavatories are set up and every part fitted and thoroughly inspected before shipment.

Soap Cups, Towel Racks and other Bath Room and Lavatory Trimmings shown on pages 462-465.



R-36.

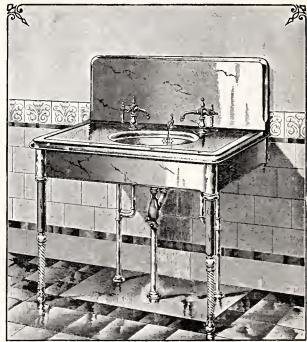
talian Marble Corner Slab 26 x 26 inches, 14 inches thick, 14-inch Backs, 5-inch Apron, 15 x 19-inch Oval Basin, Nickel Plated Ideal Basin Waste, No. 6 Fuller Basin Cocks, Brass Legs with Apron Holders, Trap with Waste, and Supply Pipes with Bell Air Chambers. Price, as described, \$40.00 Add for countersunk Italian Marble Floor Slab, 26 x 26 inches, 14 inches thick, 8.00

This Lavatory can be furnished in any American or Foreign Marble, Onyx or Jasper, and in any size required.

Our Marble is carefully selected and highly finished.

We have recently organized a Lavatory Department, wherein all Lavatories are set up and every part fitted and thoroughly inspected selore shipment.

Soap Cups, Towel Racks and other Bath Room and Lavatory Trimmings shown on pages 462-465.



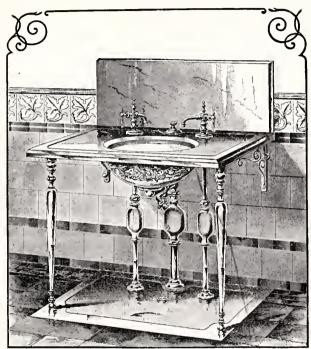
D-43

R-43. Ital	ian Marble Slab 22 x 32 inches, 11 inches thick, 14-inch Back, 5-i	inch Ap	oron, 15 x 1	9-ineh	Oval Basin	,
Nickel	Plated No. 4 Fuller Basin Cocks, Chain Stay, Legs with Apron H	Iolders,	Trap with	Waste,	and Suppl	y
Pipes :	with Air Chambers. Price as described,					<b>*34</b> .
R-44. Cor	nplete as described, with Right Hand End,					34.
R-45. Con	nplete as described, with Left Hand End,					34.
Ad	d for countersunk Italian Marble Floor Slab, 22 x 32 inches, 11 inch	es thick	ι,			8.

This Lavatory cau be furnished in any American or Foreign Marble, Onyx or Jasper, and in any size required.

Our Marble is carefully selected and highly finished.

We have recently organized a Lavatory Department, wherein all Lavatories are set up and every part fitted and thoroughly inspecte before shipment.



R-50.

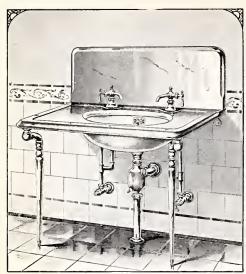
R-50	. Italian Marble Slab 22 x 32 inches, 14 inches thick, 14-inch Back, 15 x 19-inch (	Oval	Embossed	Basin, 1	Vickel	
	Plated Ideal Basin Waste, No. 4 Fuller Basin Cocks, Heavy Cast Brass Legs with					
	with Waste, and Supply Pipes with Bell Air Chambers. Price, as described,		-			\$44.00
	. Complete as described, with Right Hand End,					44.00
R-5	Complete as described, with Left Hand End,					44.00
	Add for countersunk Italiau Marble Floor Slab, 22 x 32 inches, 11 inches thick,					8.00

This Lavatory can be furnished in any American or Foreign Marble, Onyx or Jasper, and in any size required.

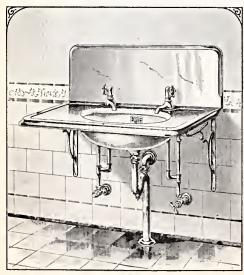
Our Marble is carefully selected and highly finished.

We have recently organized a Lavatory Department, wherein all Lavatories are set up and every part fitted and thoroughly inspected before shipment.

Soap Cups, Towel Racks and other Bath Room and Lavatory Trimmings shown on pages 462-465.



R-57.



R-64.

R-57.	Lavatory. Italian Marble Slab, 22 x 32
in	ehes, 12-inch Back, 15 x 19 "Corinthian"
Ba	sin with Removable Overflow Strainer,
Ni	ickel Plated No. 6 Fuller Basin Cocks,
Su	apply Pipes with Air Chambers and Loose
K	ey Valves, Nickel Plated Trap with Vent.
an	d Offset Legs, complete,

R-58.	Com	plet	e, as	s de	seri	bed	wi	th	Rig	ht	Hand	
Eu	ıd, .											35

R-59.	Com	plete	, as	s d	eser	ibed,	w	ith	Lei	Ĩŧ	Hand	
E	nd.											33

These Lavatories can be furnished in any American Foreign Marble, Onya or Jasper, and in any size required. Our Marble is carefully selected and highly finished.

We have recently organized a Lavatory Department wherein all Lavatories are set up and every part fitted a thoroughly inspected before shipment.

R-64. Lavatory. Italian Marble Slab, 20 x 30	
inches, 12-iuch Back, 15 x 19 "Corinthian"	- 14
Basin with Removable Overflow Strainer,	
Nickel Plated Low-down Broughton Self-	
closing Basin Cocks, Supply Pipes with Air	
Chambers and Loose Key Valves, Nickel	
Plated Trap with Vent, and Brackets, com-	
plete,	32.0

R-65.	Co	m	olete	, as	des	eril	bed,	wit	h	Righ	nt	Hand	
En	d,												32.0

R-66.	Ce	mp	lete,	, as	des	cri	bed,	Wit	h I.	æft	Hand	
Ei	ıd,		-	-								32.0





R-78.

R-71.	Lave	itory.	Italia	n Mar	ble :	Slab,	24	x 32	2
in	ches,	14-in	ch Bacl	k, 15	x 19	Ova	l Ba	asin,	
N	ickel	Plate	d "Co	rinthi	m"	Com	bina	ition	ı
S	apply	and	Waste,	Trap	with	ı Ve	nt,	and	ĺ
0	ffset I	egs, (	complete	е,		_			<b>\$39.00</b>

R-72.	Complete, as	described,	with	Right	Hand			
L'o	A					20	00	

R-73.	Comp	olete,	as	de	scri	bed,	with	Left	Hand		
En	id.									39	OO

These Lavatories can be furnished in any American or Foreign Marble, Onyx or Jasper, and in any size required,

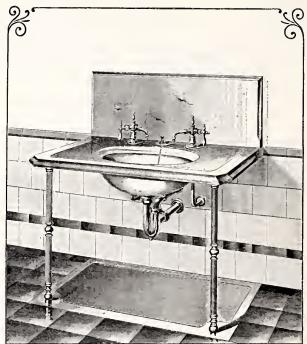
Our Marble is carefully selected and highly finished.

We have recently organized a Lavatory Department, wherein all Lavatories are set up and every part fitted and thoroughly inspected before shipment.

R-78.	Lava	atory.	Italian	a Mar	ble S	lab,	$^{24}$	x 3'	2
in	ches,	14-in	ch Back	, 15	x 19	Ova	1 B	asin	, k
N	ickel	Plate	d "Cor	inthia	in." (	oni	bins	tio	n
Sı	apply	and	Waste,	Trap	with	Vε	nt,	an	ı
B	racket	ts, cor	nplete,			-			*39.00

R-79.	Co	m	plcte,	as	des	eri	bed,	with	Righ	t Hand	
En	d,	_		_		_			-		39.00

R-80.	Co	mp	lete,	as	des	eril	bed,	wi	th	Lef	t :	Hand		
En	d,			-	-				_			-	39.	00



R-85.

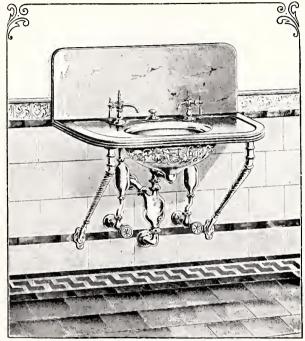
R-85. Italian Marble Slab 20 x 30 inches, 11 inches thick, 12-inch Back, 14 x 17 Oval Pate	ent Overfl	ow Bas	in, Nickel	
Plated Plug and Chain, No. 2 Fuller Basin Cocks, Chain Stay, Nickel Plated Legs	, P-Trap	with	Vent, and	
Supply Pipes to Wall. Price as described,				\$25.
R-86. Complete as described, with Right Hand End,				25.
R-87. Complete as described, with Left Hand End,				25.
Add for countersunk Italian Marble Floor Slab, 22 x 32 inches, 14 inches thick,				8.

This Lavatory can be furnished in any American or Foreign Marble, Onyx or Jasper, and in any size required,

Our Marble is carefully selected and highly finished.

We have recently organized a Lavatory Department, wherein all Lavatories are set up and every part fitted and thoroughly inspect before shipment.

Soap Cups, Towel Racks and other Bath Room and Lavatory Trimmings shown on pages 462-465.



R-92.

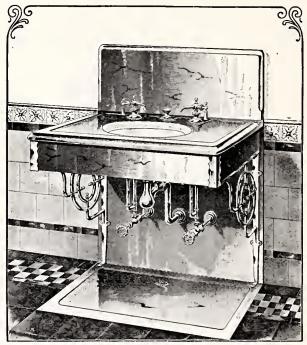
2. Italian Marble Slab 22 x 32 inches, 11 inches thick, 14-inch Back, 15 x 19 Oval Embossed Basin, Nickel Plated Ideal Basin Waste, No. 4 Fuller Basin Cocks, Heavy Cast Brass Brackets, Trap with Waste, and	<b>9</b> 10 10
Supply Pipes with Bell Air Chambers and Stop Valves. Price, as described,  3. Complete as described, with Right Hand End, \$42.50; R-94, with Left Hand End, \$42.50.	<b>6</b> 42.30
Add for countersunk Italian Marble Floor Slab, 22 x 32 inches, 14 inches thick,	8.00
Shell Soap Cup cut in Marble, extra,	3.00

This Lavatory can be furnished in any American or Foreign Marble, Onyx or Jasper, and in any size required

Our Marble is carefully selected and highly finished.

R-9

We have recently organized a Lavatory Department, wherein all Lavatories are set up and every part fitted and thoroughly inspected before shipment.



R-99.

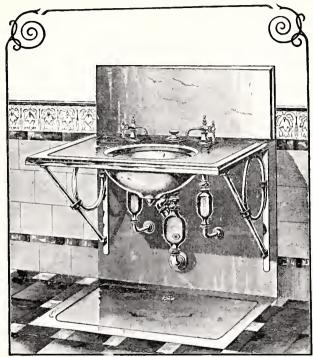
9-inch	Oval Ba	sin.
o Floor,	, Ideal T	rap
-		<b>\$</b> 60
	-	. 60
	-	. 60
		. 8
	o Floor	19-inch Oval Ba o Floor, Ideal T

This Lavatory can be furnished in any American or Foreign Marble, Onyx or Jasper, and in any size required.

Our Marble is carefully selected and highly finished.

We have recently organized a Lavatory Department, wherein all Lavatories are set up and every part fitted and thoroughly inaped before shipment

Soap Cups, Towel Racks and other Bath Room and Lavatory Trimmings shown on pages 462-465.



D-108

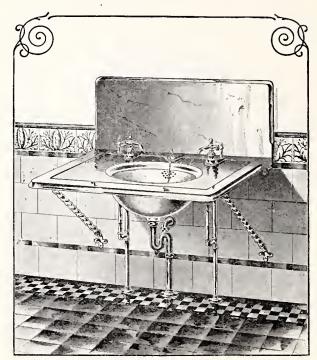
-1	.08.	Italian Marble	Slab 22 x 32	inches.	1‡ inches t	hick, 14	-inch B	ack,	15 x 1	9-inch	Ova	l Ba	sin, Ni	ekel P	lated	
	Idea	l Basin Waste,	No. 3 Fuller	Basin	Cocks, Cas	Brass	Bracket:	s, Tr	ap wit	h Was	te,	and	Supply	Pipes	with	
		Air Chambers.														\$39.00
-1	09.	Complete as des	scribed, with	Right I	Iand End,	_	-	_	_		_			-	-	39.00
-1	10.	Complete as de	scribed, with	Left Ha	and End,	_			_	_	_		_	-	-	39.00
		Add for counte				22 x 32	inches,	11 i	nches	thick,		-	-			8.00

This Lavatory can be furnished in any American or Foreign Marble, Onyx or Jasper, and in any size required,

Our Marble is carefully selected and highly finished.

We have recently organized a Lavatory Department, wherein all Lavatories are set up and every part fitted and thoroughly inspected before abipment.

Soap Cups, Towel Racks and other Bath Room and Lavatory Trimmings shown on pages 462-465.



R-115.

R-115.	Italian Marble Slab 20 x 30	inches, 1	inches	thick, 1	4-inch	Back,	, 14 x	17-inc	h O	ral Basir	, Nick	el Pla	ated	
No.	6 Fuller Basin Cocks, Ch	ain Stay and	l Chain	, Brack	ets, S	-Trap	with	Vent,	and	Supply	Pipes	with	Air	
Cha	imbers. Price, as described									-	-	-	-	\$27.1
R-116.	Complete as described, with	ı Right Han	i End,				-							27.
R-117.	Complete as described, with	Left Hand	End,											27.

This Lavatory can be furnished in any American or Foreign Marble, Onyx or Jasper, and in any size required,

Our Marble is carefully selected and highly finished.

We have recently organized a Lavatory Department, wherein all Lavatories are set up and every part fitted and thoroughly inspect before shipment

Soap Cups, Towel Racks and other Bath Room and Lavatory Trimmings shown on pages 462-465.



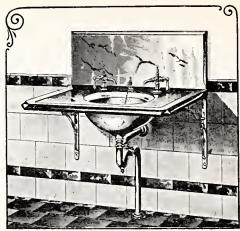
R-122.

This Lavatory can be furnished in any American or Foreign Marble, Onyx or Jasper, and in any size required.

Our Marble is carefully selected and highly finished.

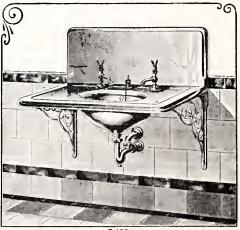
We have recently organized a Lavatory Department, wherein all Lavatories are set up and every part fitted and thoroughly inspected fore shipment,

Scap Cups, Towel Racks and other Bath Room and Lavatory Trimmings shown on pages 462-465,



R-129.

Italian Marble Slab 20 x 24 inches, 14 inches thick, 10 inch Back, 14 inch Round Patent Overflow Basin, Nickel Plated Metal Plug with Rubber Stopper, Nickel Plated S-Trap, No. 1 Fuller Basin Cocks, Chain Stay and Chain, and Nickel Plated Steel Brackets. Price as described,



R-136.

Italian Marble Slab 20 x 24 inches, 11 inches thick, 10-inch Back, 14-inch Round Patent Overflow Basin, Nickel Plated Metal Plug with Rubber Stopper, Doberty Self-closing Basin Cocks, Chain Stay and Chain, P-Trap with Vent, and Enameled Iron Brackets. Price as described,

If with No. 2 Fuller Basin Cocks, deduct

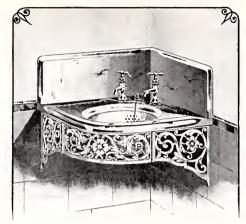
These Lavatories can be furnished with Right nr Left Hand Ends, and in any size required.

Our Marble is carefully selected and highly finished.

We have recently organized a Lavatory Department, wherein all Lavatories are set up and every part fitted and thoroughly inspect before shipment.

**\$16** 

\$16

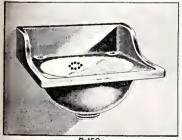


R-143.

ud	es Ital	ian M	Iarble	Slab	20 x 20	inche	s, 1‡	inch	ics	thick,	12-i	nch	Backs,	14-inch	Round	Patent	Ove	rflow	
	Basin,	Enan	neled	Iron	Apron	and 1	Brack	ets,	Nic	kel-pla	ited	Self	closing	Basin	Cocks,	Chain	Stay	and	
	Chain.	Pri	ice, as	descr	ibed,	-	-		-		-	-	-			-	-	-	\$16.00
e :	as abov	e, wit	h 22 s	22 in	ch Slab,						-								18.00

When desired, we furnish this Lavatory with Fuller or Compression Basin Cocks, but as they are generally used in blic buildings, we recommend Self-closing Cocks.

## CLOW'S EARTHENWARE LAVATORIES.



н-	15	v.	

14 x 14 inches.		oue piece.	- \$6.50
Rack and Rasin	combined in	one nices	C:

,	Back, and Basin,	, combine	d in	one	piece.	Size	
	18 x 18 inches.	Price,		-	-	-	9.25



R-151.

nao,	Dack, and Dasin,		111	one	prece.	0120	
	14 x 14 inches.	Price, _			-	-	\$6.50
						/	
lab,	Back, and Basin,	combined	in	one	picce.	Size	
	18 x 18 inches.	Price,			٠.	_	9.25

## CLOW'S ROYAL PORCELAIN LAVATORIES.



R-158.



R-165.

Royal Porcelain Lavatory, Back and Legs, Nickel Plated Br

Removable Overflow Strainer and Chain, No. 6
Nickel Plated Fuller Basin Cocks

and Trap with Vent.

Royal Porcelain Lavatory, Back and Legs, Nickel Plated Brass Removable Overflow Strainer and Chain, Combination Pedal Supply Vnlve, Supply Pipe, Spout with Jewel Cup and Trap with Vent.

DIMENSIONS—Length, 25 inches; width, 20 inches; height of Back, 12 inches; Basln, 12 x 17 inches. DIMENSIONS—Length, 25 inches; width, 20 inches; height Back, 12 inches; Bash, 12 x 17 inches.

	Class A.	Class B.		Class A.	Class .
Price. as described,	\$47.50	<b>\$39.75</b>	Price, as described,	<b>\$44.00</b>	\$35.5
If with Bronzed Iron Legs,	40.75	35.00	If with Bronzed Iron Legs,	36.75	31.0

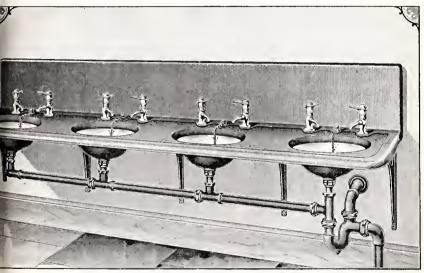
The demand for Lavatories more durable and sanitary than Marble or Enameled Iron has been steadily increasing. To meet this dema we have designed the Royal Porcelain Lavatories illustrated above.

For Offices, Hospitals, Schools and other Public Buildings, these fixtures are especially suitable. Fitted with the Pedal Attachment she in R-188, they are without equal for use in Operating Rooms or Physicians' Offices. The glaze, which is pure white, is absolutely impervit to stains, and protects the ware from all dissintegration.

In firing, some of these Lavatories become marked with small spots or lines, which in no way affect the practical qualities or generappearance of the fixtures. These are known as Class "B," and are recommended when economy is a consideration.

## CLOW'S SLATE LAVATORIES.

FOR PUBLIC BUILDINGS.



R-175.

tte Lavatory, 84 x 22 inches, 14-incb Back, Four 14 x 17-inch Oval Enameled Iron Basins with Patent Basin Clamps, Brass Plugs, Chains and Rubber Stoppers, Polished Brass "Broughton" Self-closing Basin Cocks, 14-inch Rough Brass Continuous Waste, Trap with Vent, and Galvanized Iron Brackets.

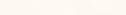
The hard usage to which Lavatories are subjected in Public Buildings has led to the adoption of Slate Slate with Enameled Iron Basins.

Marble soon becomes stained if not broken, and the Earthenware Basins are too easily cracked to be of service; Slate, on the contrary, tains its original color, and the Iron Basins are practically indestructible when ordinary care is taken.

Price,

## CLOW'S ROYAL PORCELAIN DRINKING FOUNTAINS.





\$20.00

closing Fa	aucet, Strainer	, Trap, Chain Stay an	d Cup Hook.
		Class A.	Class B

Royal Porcelain Drinking Fountain with Nickel Plated Self-

DIMENSIONS—Length, 191 inches; width, 18 inches; height of Back, 12 inches.



Royal Porcelain Drinking Fountain with Nickel Plated If-

							Class A.	ClauB.
Price,	_	_	_	_	-	-	\$23.00	\$180

closing Faucet, Drip Cup, Brackets and Trap.

DIMENSIONS—Length, 14½ inches; width, 18 inches; height of Back, 10½ inches,

Royal Porcelain Drinking Fountnins are especially adapted for use in Hotels, Railway Stations, Hospitals, etc. Like all fixtures de of Royal Porcelain, they are practically indestructible. Marble, on the contrary, is easily chipped or broken, while Enameled Iron, the injured by a falling cup or blow soon becomes worthless. In point of beauty Royal Porcelain Fountains are without a rival. Ma in one piece, with all corners rounded, they are easily kept clean—an important feature that must commend them.

\$15.00

<sup>&</sup>quot;In firing, some of these Fountains become marked with small spots or lines which in no way affect the durability of the Porcia, or its general appearance. These are classed "B" to distinguish them from the fixtures that are free from all blemishes. When occur must be considered, Clow's "B" Fountains are recommended.

## DRINKING FOUNTAINS.



R-190.

Italian Marble Slab 18 x 14 inches, 14-inch Back, Nickel Plated No. 2 Fuller Pantry Cock, Nickel Plated BrassBrackets, Brass Drip Cup, Ideal Trap with Vent, Glass Holders and Two Ornamental Glasses.Price, as described, \$20.00If without Trap, deduct5.00If without Trap, Glass Holders and Glasses, deduct8.00



R-192.

Italian Marble Slab 18 x 14 inches, 14-inch Back, Nickel Plated No. 2 Fuller Pantry Cock, Nickel Plated Brass Brackets, Brass Drip Cup, Brass Waste to Wall, Glass Holders and Two Ornamental Glasses. Price, as described, . \$17.00

If without Glass Holders and Glasses, deduct 3.00



R-195. COPPER ALCOVE.

No. 1. Copper Alcove, 64 inches wide, 10 inches high, 34 inches deep, inside measurements, \$13.50
No. 2. Copper Alcove, 74 inches wide, 11 inches high, 34 inches deep, inside measurements, 15.50
Made of Heavy Sheet Copper and Cast Brass, highly finished and Nickel Plated.

We can furnish these Drinking Fountains in any American or Foreign Marble, Onyx or Jasper, and in any special design or size.

## MARBLE.



R-225. CORNER SLAB, WITH TWO BACKS.



R-226. SINGLE BACK SLAB.

#### CORNER SLABS.-R-225.

SIZE OF SLAB INCHES	18 x 18	*19 x 19	*20 x 20	21 x 21	22 x 22	24 x 24
FEET IN SLAB, 10-INCH BACKS	4 ft. 11 in. 5 ft. 5 in. 6 ft.	5 ft. 10 in.	6 ft. 4 in.	6 ft. 9 in.		8 ft. 2 in

#### SINGLE BACK SLABS.-R-226.

SIZE OF SLAB INCHES	*19 x 24	*20 x 24	20 x 26	20 x 28	*20 x 30	22 x 28	22 x 30
FEET IN SLAB, B-INCH BACK FEET IN SLAB, 10-INCH BACK FEET IN SLAB, 12-INCH BACK	5 ft. 7 in.	5 ft. 10 in.	5 ft. 10 in. 6 ft. 3 in. 6 ft. 8 in.	6 ft. 9 in.	7 ft. 2 in.	7 fc. 2 in.	7 ft. 6 in.



R-227. RIGHT HAND END SLAB.



R-22B. LEFT HAND END SLAB.

## RIGHT OR LEFT HAND END SLABS.-R-227 and R-228.

SIZE OF SLAB INCHES	*19 x 24	*20 x 24	20 x 26	20 x 28	*20 x 30	22 x 28	22 x 30
FEET IN SLAB, 10-INCH BACKS	6 ft. 11 in.		7 ft. 8 in.	8 ft. 1 in.	8 ft. 6 in.	7 ft. 11 in. 8 ft. 8 in. 9 ft. 4 in.	9 ft.

\*These sizes carried in stock in Italian Marble, cnt with two Cock Holes, 14-inch Round Bowl, and for Basin Clamp When wanted for one Cock, a Chain Stay (see V-3) or Cock Hole Plng (see V-32) can be substituted for second Cock.

Stock sizes marked \* we also carry in Dark Tennessec Marble, cut as above, with 10-inch Backs only.

Average weight of Marble Slabs, boxed, 121 pounds per square foot.

Slabs ordered without Backs or Sides cost more per square foot.

Slabs for Combination Cocks and Oval Bowls must not be less than 22 inches wide.

All Slabs have 8-inch Backs, unless otherwise ordered.

In ordering Slabs be particular to state size, kind of Marble, number of Cock Holes, if for Chain Stay and Clamps, s of Bowl, and whether round, oval or square.

In calculating measurements add one inch to each finished edge.



## -235. RECESS SLAB WITH BACK AND TWO ENDS.

This Slab finishes flush with the wall. Rccess Slabs are varied in size that a table of measurements would be of benefit.



#### R-240. RADIATOR OR COUNTER TOP.

In measuring allow about 2-inch projection all around. We recommend the use of Pink Knoxville or No. 2 Tennessee Marble for Radiator or Counter Tops. It presents a very handsome appearance and does not stain.

#### STOCK SIZES.

## MARBLE SLABS CUT FOR OVAL BOWL.

#### CORNER SLABS.-R-245. (NOT ILLUSTRATED.)

		 		Y	
FOR 14 X 17 BOWL		 	INCHES		22 x 22 x 10
NUMBER OF FEET IN SLAB		 		6 ft. 4 in.	7 ft. 3 in.

## SINGLE BACK SLABS.-R-246. (NOT ILLUSTRATED.)

	-,	,				
FOR 14 X 17 BOWL INCHES	20 x 24 x 10	20 x 26 x 10	20 x 28 x 10	20 x 30 x 10	20 x 30 x 12	
FOR 15 X 19 BOWL INCHES						22 x 32 x 12
NUMBER OF FEET IN SLAB	5 ft. 10 in.	6 ft. 3 in.	6 ft. 9 in.	7 ft. 2 in.	7 ft. 7 in.	8 ft. 6 in.

#### RIGHT OR LEFT HAND END SLABS.-R-247 and R-248. (NOT ILLUSTRATED.)

FOR 14 X 17 BOWL INCHES	20 x 24 x 10	20 x 26 x 10	20 x 28 x 10	20 x 30 x 10	20 x 30 x 12	22 x 32 x 12
FOR 15 X 19 BOWL INCHES						22 x 32 x 12
NUMBER OF FEET IN SLAB	7 ft. 2 in.	7 ft. 8 in.	8 ft. 1 in.	8 ft. 6 in.	9 ft. 3 in.	10 ft. 6 in.

#### TEMPLET OF OVAL BOWL SLABS-STOCK SIZES.

CENTER TO CENTER OF COCK HOLES INCHES $4$ BACK OF SLAB TO CENTER OF COCK HOLES INCHES $2$ BACK OF SLAB TO CENTER OF BOWL INCHES	12 22 x 22 42 12 23 3 14½ 17	12 4 103 1	12 20 x 28 12 12 12 4 4 103 103	20 x 30 12 4 103	22 x 32 12 4½ 14¼
---------------------------------------------------------------------------------------------------------------------------------	------------------------------	---------------------	---------------------------------------	---------------------------	----------------------------

Bowl always in center of Slab lengthwise.

Any size Slabs made to order. Slabs longer than 6 feet will have to be made of two picces,

Soap Cups cut in marble, as shown in R-254, \$2.00 net.

Mouldings, other than O. G., R-250, charged extra at rate of 10 cents per foot, nct.

Nickel Plated Union Strips for Sectional Marble Slabs, each, \$1.75 net.

#### MARBLE.



Sectional Cut showing O. G. Moulding.



Sectional Cut showing Fillet and Chamfer Moulding.



R-252. Sectional Cut showing Plain Chamfer Moulding.

10. I



Sectional Cut showing Triple Bead Monlding.



"Fancy" Shell Soap Cnp.

We are prepared to furnish Lavatories in the following grades of Fancy Marbles: African, St. Banme, French Jaspi Rouge Royal, American, Tenuessce, Florence and Italian; also in Mexican, Arizona, and Algerian Onyx.

## APPROXIMATE PRICES OF MARBLE, SLATE AND SOAPSTONE.-Per Square Foot.

#### ITALIAN MARBLE.

THICKNESS	3	1‡	1 1 7	2
POLISHED ONE SIDE PER SQUARE FOOT POLISHED BOTH SIDES PER SQUARE FOOT COUNTERSUNK AND POLISHED PER SQUARE FOOT WAINSCOT PER SQUARE FOOT	.66 .72	.78 .84 .90	1.02 1.08 1.15	1.30 1.35 1.45

#### TENNESSEE MARBLE-PINK, FAWN, AND DARK.

THICKNESS INCHES	1	1 1	1 ½	2
POLISHED ONE SIDE	.60	.72	.90	1.15
POLISHED BOTH SIDES PER SQUARE FOOT	.66	.78	.96	1.21
COUNTERSUNK AND POLISHED PER SQUARE FOOT		.72	1.02	1.38
WAINSCOT	.60			

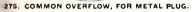
#### SLATE AND SOAPSTONE. '

THICKNESS	1	14	1 ½	2
RUBBED ONE OR BOTH SIDES	. 45	.50	.70	1.00
DRAIN BOARD GROOVING	.75			
WAINSCOT PER SQUARE FOOT WAINSCOT, MARBLEIZED PER SQUARE FOOT	. 45			
WEIGHT, BOXED POUNOS PER SQUARE FOOT	17	22	26	35

The above Prices are approximate only, and intended to aid the Architect or Contractor in computing the cost on Mars or Slate for ordinary work. Special Edges and Grooving or Extra Large Slabs will occasion an additional charge.

## EARTHENWARE.







R-276. PATENT OVERFLOW, FOR METAL PLUG.

ROUND BASINS.- R-275 and R-276.

OUTSIDE DIAMETER INCHES	12	13	14	15	16
R-275. COMMON OVERFLOW EACH R-276. PATENT OVERFLOW EACH NUMBER IN CRATE	.70 .77	.83 .90	.90 1.00 48	1.35 1.50	1.85 2.00



1-277, PATENT OVERFLOW, FOR RUBBER PLUG.



R-278. NO OVERFLOW, FOR METAL PLUG.

ROUND BASINS .- R-277 and R-278.

OUTSIDE DIAMETER	12	13	14	15	16
R-277. PATENT OVERFLOW EACH R-278 WITHOUT OVERFLOW EACH	.95	1.05	1.15	1.70	2.20
	.55	.70	.75	1.20	1.55



1-279. COMMON OVERFLOW, FOR METAL PLUG.



R-280. PATENT OVERFLOW, FOR METAL PLUG.

OVAL BASINS .- R-279 and R-280.

OUTSIDE DIAMETER												NCHI	ES	14 x 17	15 x 19
R-279. COMMON OVERFLOW R-280. PATENT OVERFLOW NUMBER IN CRATE											 	EAG	CH	2.10 2.50 48	3.35 3.50 48



R-281. PATENT OVERFLOW OVAL BASIN. FOR RUBBER PLUG.



R-282, OVAL BASIN WITHOUT OVERFLOW. FOR METAL PLUG

OVAL BASINS.-R-281 and R-282.

OUTSIDE DIAMETER					 						v	CHES	~ 14 x 17	15 x 19
R-281. PATENT OVERFLOW												EACH	2.80	3.80
R-282, WITHOUT OVERFLOW NUMBER IN CRATE											:	EACH	2.10 48	3.35 48



R-285. PLAIN RECESS BASIN.



R-286. PLAIN DECORATED RECESS BASIN

RECESS BASINS.-R-285 and R-286.

OUTSIDE DIAMETER	14 x 17	15 x 19	14 x 14
R-285. PLAIN RECESS	4.70	5.70	
R-286. PLAIN DECORATED RECESS EACH		****	12.00

R-286 Recess Basin is carried in stock, with a handsome decoration as shown, in Brown Tint underglazed.



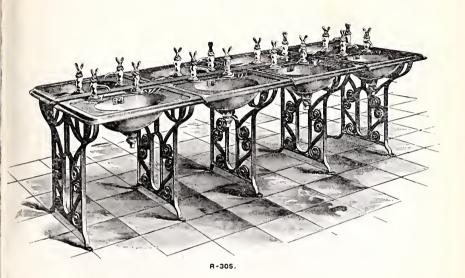
R-288, EMBOSSED OVAL BASIN.



R-290. PLAIN SQUARE BASIN. EMBOSSED OVAL AND SQUARE BASINS.-R-288 and R-290.

OUTSIDE DIAMETER	ES 14 x 17	15 x 19
N-200. EMBOSSED, PATENT OVERFEOW, METAE FEOD	CH 3.25 CH 4.70	4.10 4.25 5.70 6.05

#### ON FRAMES



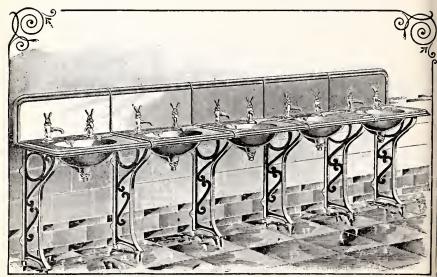
Double Enameled Iron Sectional Lavatory with Eight Oval Basins, Painted Exterior, Nickel Plated Removable Brass Overflow Strainers and
Chains, Plugs with Rubber Stoppers, Nickel Plated Doberty Self-closing Basin Cocks and Nickel Plated Brass Union Strips

#### PRICES AND DIMENSIONS.

SIZE OF EACH SECTION	16 x 20	18 x 24
SIZE OF BASIN	11 x 14 119 00 30.00	12 x 15 130.00 32.50

These Wash Stands are thoroughly sanitary in every respect and are recommended for use in Public Buildings. Any number of Sections can be furnished. 24 x 18-inch Stah will always be sent unless otherwise ordered

ON FRAMES.



R-311.

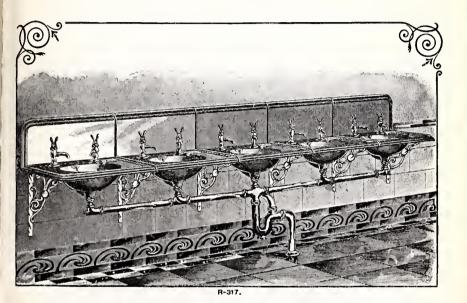
Enameled Iron Sectional Lavatory with Five Oval Basins, Painted Exterior, 101-inch Enameled Iron Backs, Nickel Plated Removable Bras
Overflow Strainers and Chains, Plugs with Rubber Stoppers, Nickel Plated Doherty Self-closing Basio Cocks,
and Nickel Plated Brass Union Strips.

#### PRICES AND DIMENSIONS.

Size of each Section,			-	Inches,	16 x 20	18 x	
Size of Basin,		-		Inches,	11 x 14	12 x	
Price, complete as shown and described,	-		-		<b>\$73.00</b>	\$80.)	
Add or deduct for each complete Section, down to two-section,		_			14.25	15.	
If with Polished Brass Waste Pipe and Trap, as shown in R-317, add	-		-	\$22,00			
If with Right or Left Hand End Back, add				2.00			

These Wash Stands are thoroughly sanitary in every respect, and are recommended for use in Public Buildings. Any number of Section be furnished 24 x 18-ioch Slab will always be seet unless otherwise ordered.

ON BRACKETS.

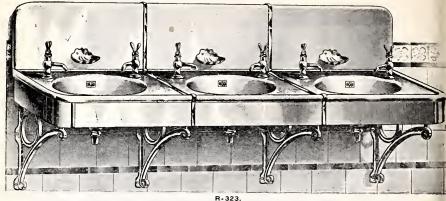


Enameled Iron Sectional Lavatory with Five Oval Basins, Painted Exterior, 104-inch Enameled Iron Backs, Nickel Plated Removable Brass
Overflow Strainers and Chains, Plugs with Rubber Stoppers, Nickel Plated Doherty Self-closing Basin Cocks, 14-inch
Connected Waste, 14-inch Trap with Vent, and Nickel Plated Brass Union Strips.

#### PRICES AND DIMENSIONS.

Size of each Section, .		_								_		Inches	16 x 20	18 x 24
Size of Basin,		-				-					_	Inches	11 x 14	12 x 15
Price, complete, as sho	wn and d	escribed	i, .		-				-	-			\$89.50	<b>\$</b> 96.50
Add or deduct for each	complete	section	n down to	two-s	section	,	-	-	-	-			17.75	19.25
If with Right or Left I	Iand End	Back,	add .				-		-				2.00	2.00
If without Continuous	Waste and	d Trap,	deduct.		-		-		-			\$22.00		

These Wash Stands are thoroughly sanitary in every respect, and are recommended for use in Public Buildings.



Enameled Iron Sectional Lavatory with three Oval Basins, 12 inch Enameled Iron Backs, Aprons and Brackets; Nickel Plated Removable Brass
Overflow Strainers and Chains, Plugs with Rubber Stoppers, Nickel Plated Doherty Self-closing
Basin Cocks, Soap Cups, and Nickel Plated Brass Union Strips.

DIMENSIONS-Slabs, 18 x 24 inches; Basins, 12 x 15 inches

Price, complete as shown and described,		-		-	_		-				\$57.00
Add or deduct for each complete Section,	-	-	-	-		-	-	-	-		19.00
If with Right or Left Hand End Back, add	-							_			2.00



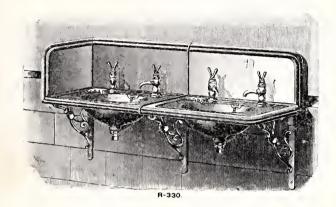
R-324.

Enameled Iron Sectional Lavatory with two Oval Basins, Sink on End, 12 inch Enameled Iron Backs, Aprons and Brackets, Nickel Plated Removable Brass Overflow Strainers and Chains, Plugs with Rubber Stoppers, Nickel Plated Doberty Self-closing Basin Cocks and Sink Bibbs, Song Cups and Nickel Plated sess Union Strips.

DIMENSIONS - Slabs, 18 x 24 Inches; Basins, 12 x 15 Inches; Sink, 18 x 24 inches

Price, complete as shown and described,									\$57.00
Add or deduct for each complete Section.						-	-		19.00
If with Right or Left Hand End Ruck add	•		•	•	-	•	-	-	9.00

# CLOW'S ENAMELED IRON SECTIONAL LAVATORIES. ON BRACKETS.





R-331.

Enameled Iron Sectional Lavatory with Two Oval Basins, Painted Exterior, 101-inch Enameled Iron Backs with Right or Left Hand End,
Nickel Plated Removable Brass Overflow Strainers and Chains, Plugs with Rubber Stoppers, Nickel Plated Doherty Selfclosing Basin Cocks, Nickel Plated Brass Union Strips and Painted Brackets.

0: 40:1						PRI	CES A	ND DII	MENS	ONS.				
Size of Slab, Size of Basin,														18 x 24
				٠,	٠.	-							11 x 14	12 x 15
Price, R-330 and	11-331,	comp	iete as	shown	n and	descr	ibed,						\$29.00	\$32.00

Add or deduct for each complete section (no ends), \$32.00



R-335.

R-335. Enameled Iron Lavatory with 10½-inch
Back and Oval Basin, Nickel Plated Brass
Removable Overflow Strainer, Chain, Plug with
Rubber Stopper, No. 0 Fuller Basin Cocks,
Painted Irou Brackets, and Nickel Plated Trap
with Vent. Exterior Painted.

DIMENSIONS — Slab, 18 x 25 inches; Basin, 12 x 15 inches,

Soap Cups, Towel Racks and other Bath Room and Lavatory Trimmings shown on pages 462-465.



R-336. Enameled Iron Lavatory with 12-inch Back, Aprons and Oval Basin, Nickel Plated Brass Removable Overflow Strainer, Chain, Plug with Rubber Stopper, Nickel Plated No. 0 Fuller Basin Cocks and Enameled Iron Brackets,

DIMENSIONS — Slab, 18 x 24 inches; Basin, 12 x 15 inches.

Price, as described, \$17.50

## CLOW'S ENAMELED IRON LAVATORIES.



R-340.



R-341.

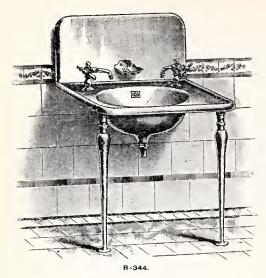
Enameled Iron Combination Slab and Oval Basin with Nickel Plated Brass Removable Overflow Strainer, Chain, Plug with Rubber stopper, Nickel Plated No. 9 Fuller Basin Cocks, Painted Iron Brackets and Nickel Plated Trap with Vent, Exterior Painted.

#### DIMENSIONS.

Length of Back, 20 inches; Front to Back, 164 inches; Basin, 11 x 14 inches. Enameled Iron Combined Corner Slab and Oval Basin with Nickel
Plated Brass Removable Overflow Strainer, Chain, Plug
with Rubber Stopper, Nickel Plated No. 0 Fuller
Basin Cocks and Trap with Vent.
Exterior Painted.

#### DIMENSIONS.

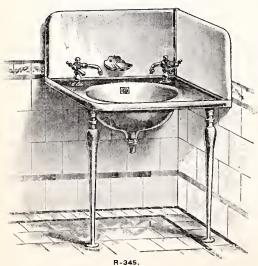
Length on sides, 15 inches, Front to Back, 194 inches; Basin, 11 x 14 inches,



R-344. Enameled Iron Lavatory with 12-inch Enameled Iron Back, Oval Basin with Nickel Plated Removable Brass Overflow Strainer, Chain, Plug and Rubber Stopper, Iron Legs, Nickel Plated Soap Cup and No. 0 Fuller Basin Cocks. Exterior and Legs Bronzed.

Size of Slab,	Inches	16 x 20	18 x 24
Size of Basin,	Inches	11 x 14	12 x 15
Price, as described,		\$13.50	\$15.50

Soap Cups, Towel Racks and other Bath Room and Lavatory Trimmings shown on pages 462-465.



R-345. Enameled Iron Lavatory with 12-inch Enameled Iron Back and Right Hand End, Oval Basin with Nickel Plated Removable Bruss Overflow Strainer, Chain, Plug and Rubber Stopper, Iron Legs, Nickel Plated Soap Cup and No. 0 Fuller Basin Cocks. Exterior and Legs Bronzed.

 Size of Slab,
 Inches 16 x 20
 18 x 24

 Size of Basin,
 Inches 11 x 14
 12 x 15

 Price, as described,
 \$16.50
 \$18.50

R-346. Same as above, except with Left Hand End.



R-349. Enameled Iron Lavatory, with 12-inch Back, Oval Basin, Brackets, Nickel Plated Removable Brass Overflow Strainer, Chain and Plng with Rubber Stopper. Exterior and Brackets Painted.

## DIMENSIONS.

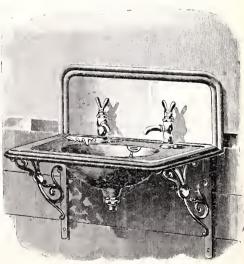
Slab, 16 x 21 inches; Basin, 11 x 14 inches

Price, as described, \$10.25

R-350. Enameled Iron Lavatory, with 10½-inch Back, Oval Basin, Brackets, Nickel Plated Removable Brass Overflow Strainer, Chain, Plug with Rubber Stopper, and Nickel Plated Doherty Self-closing Basin Cocks. Exterior and Brackets Painted.

#### DIMENSIONS.

Slah, 18 x 25 inches; Basin, 12 x 15 inches



R-350.

# CLOW'S ENAMELED IRON LAVATORIES.



Enameled Iron Combined Slab and Oval Basin, Painted Exterior, Nickel Plated Removable Brass Overflow Strainer, Plug with Rnbber Stopper, and Painted Brackets.

Dimensions same as R-340.

\$7.50 Price, as described,



Enameled Iron Combined Corner Slab and Oval Basin, Painted Exterior, Niekel Plated Removable Brass Overflow Strainer, and Plug with Rubber Stopper.

Dimensions same as R-341.

\$7.00 Price, as described,



R-360.

Enameled Iron Combined Slab and Round Basin with Rolled Edge and Patent Overflow and Plug with Rubber Stopper. Painted Exterior.

DIMENSIONS-Length of Back, 131 inches; Front to Back, 14 inches.

\$3.25 Price, as described,



Enameled Iron Combined Corner Slab and Round Basi with Rolled Edge and Patent Overflow and Plng wit Rubber Stopper. Painted Exterior.

DIMENSIONS-Length of sides, 111 inches; Front to Back, 171 inches.

83.2 Price, as described,

## CLOW'S ENAMELED IRON LAVATORIES.







R-368.



R-370.

nameled Iron Combined Slab and Oval Basin on Standard, Nickel Plated Removable Brass Overflow Strainer, and Plug with Rubber Stopper. Exterior Painted.

Dimensions same as R-340.

Price, as described,

Description and Price on application.

Enameled Iron Combined Corner Slab and Oval Basin on Standard, Nickel Plated Removable Brass Overflow Strainer, and Plug with Rubber Stopper. Exterior Painted.

Dimensions same as R-341.

Price, as described, . . . \$9.25

#### ENAMELED IRON BASINS.

PAINTED OUTSIDE.



. . . 89.25

R-375. ROUND.

 Diameter over all.
 Common Overflow.
 Patent Overflow.

 4 inches,
 \$2,40
 \$2,80

 6 inches,
 3.00
 3.60



R-376. OVAL.

 Diameter over all.
 Common Overflow.
 Patent Overflow.

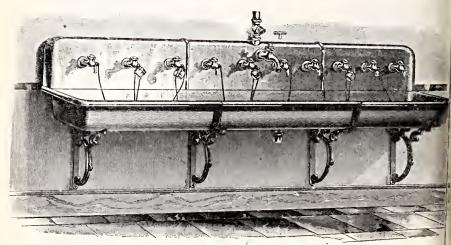
 14 x 17 inches,
 \$3.00
 \$3.50

 15 x 19 inches,
 3.50
 3.80

The above prices include nickel plated Brass Coupling and Rubber Stopper.

# ENAMELED ROLL-RIM DRINKING FOUNTAIN.

ON BRACKETS.



R-390.

Enameled Iron Roll-rim Sectional Drinking Fountain (10 feet long) with Back, 10 Brass Spouts, Loose Key Stop and Hose Bibb. alconnected with Galvanized Iron Pipe, Brass Raised Strainer for 2-inch Iron Pipe, and Iron Brackets Exterior Painted.

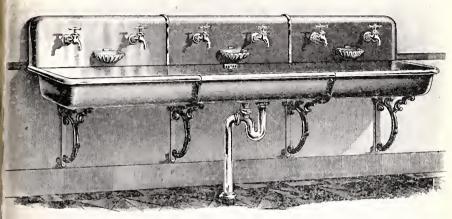
## DIMENSIONS AND PRICES.

Width, front to back, 18 inches; width inside, 14 inches; depth, 84 inches at outlet; height of back, 12 inches; depth of back, 24 inch

Lengths of Fountains, 6 ft.  Number of Spouts, 6  Price, as shown and described, \$39.00	8	10	10	14 ft. 14 \$87.00	 18 ft. 18 \$111.00	20 ft. 20 \$123.00	22 ft. 22 \$135.00	:	4 f
lf with Nickel Plated Brass Full S Trap If with Rough Brass Full S Trap (venter	(vented)	) to floor, or, add	add					*	6.

These Drinking Fountains are especially designed to suit the requirements of Schools, Hospitals and Public Institutions where is desired to accommodate a number of persons at one time.

## CLOW'S ENAMELED ROLL-RIM CAST IRON WASH SINKS.

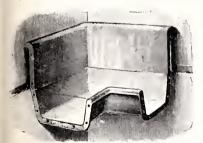


9-395.

Enameled Iron Roll-rim Wash Sink, three-section (10 feet), Enameled Iron Back and Soap Cups, Painted Iron Brackets, Removable Brass Overflow Strainer, Brass Bibbs and 14-inch Rough Brass Trap with Vent. Exterior Painted

DIMENSIONS—Width of trough, front to back, 18 inches; width inside, 14 inches. depth at outlet, 84 inches; height of back, 12 inches; depth of back, 24 inches.

Length of Sink,	5 ft.	6 ft.	8 ft.	10 ft.	12 ft.	14 ft.	15 ft.	16 ft.	18 ft.	20 ft.	22 ft.	24 ft.
Number of Bibbs,	5	2	4	6	6	8	9	9	10	12	12	14
Price, Enameled,	34.00	\$39.40	*52.70	\$66.00	<b>\$76.80</b>	\$90.10	<b>\$96,75</b>	*102.15	*114.20	\$127.50	*138.30	*151.60
Price, Galvanized,	33 00	38.20	51.10	64.00	74.40	87.30	93.75	98.95	110.60	123.50	133.90	146.80



R-396. CORNER SECTION (IN).



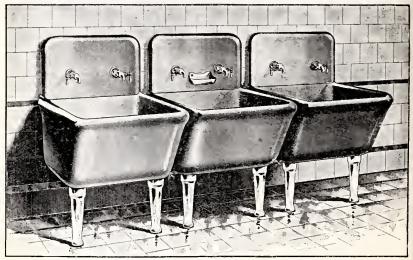
R-397. CORNER SECTION (OUT).

#### DIMENSIONS AND PRICES.

Length of R-396 on back, 4 ft., or 2 ft. from either end to corner. R-397 on front rim, 4 ft., or 2 ft. from either end to corner

Add to R-395, for either R-396 or R-397, Galvanized, \$34.00; Enameled, \$36.00.

#### CLOW'S ROYAL PORCELAIN LAUNDRY TUBS.



S-1.

Royal Porcelain Roll Rim Laundry Tubs with Porcelain Backs, Soap Cup and Legs, Adjustable Iron Frame extending from each leg to wall, Brass Fuller Bubls with Long Shank, Locknut and Coupling, and 14-inch Polished Brass Waste Plugs with Rubber Stoppers.

#### DIMENSIONS-Length of each Tub, 314 inches; width, 254 inches, depth, 15 inches, height of Back, 15 inches.

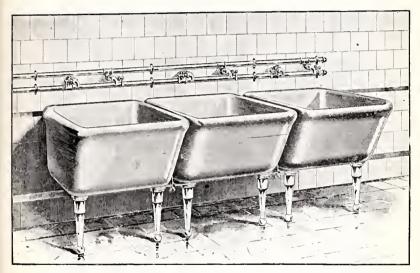
										Class A.	Class B.
Price as described, per set of Three Tubs,										<b>\$153 00</b>	\$103.0H
Price as described, per set of Two Tubs,			-		-		-		-	101 00	67.5
Wringer Bases, extra, each				-			-			5.00	5.04
If without Porcelain Backs, deduct, each		-	_							5.25	4.2.
If with Galvanized Iron Legs, as in S-4, ded	uet fo	r each	Tub			-		-	-	6.75	3.74

Royal Porcelain is conceded to be the most durable, attractive and sanitary ware for plumbing fixtures. When used for Laundry Tubs its superiority over other wares is obvious, the all-white Tubs and Porcelain Legs presenting a heautiful appearance and insuring the elemble mess so important in all Laundry appointments. The original cost is more, but the long life of the material makes it cheaper in the end. The plumbing work for a good Tub costs no more than for n cheap one

Class B Tubs are equal to Class A in durability and general appearance, the only difference being the presence of slight marks or line which must occur occasionally, in firing large pieces of Porcelain.

Any Wringer can be easily and firmly attached to our special Wringer-base, which drains into the Tubs on either side and thus prevents the water from dripping between the Tubs.

## CLOW'S ROYAL PORCELAIN LAUNDRY TUBS.



S-4.

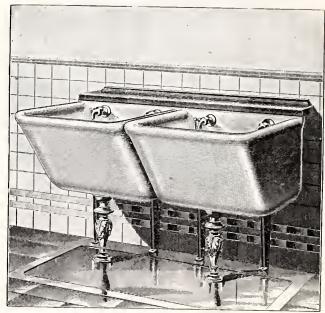
Royal Porcelain Roll Rim Laundry Tubs with Galvanized Iron Adjustable Legs, Polished Brass Supply Pipes and Finch Fuller Bihhs.

DIMENSIONS-Length of each Tub, 811 inches; width, 251 inches; depth, 15 inches.

									Class A.	Class B.
Price, as described, per Set of Three Tubs,	_	_			_		-	-	<b>\$114.00</b>	\$75.00
Price, as described, per Set of Two Tubs, .	-			_	_			-	71.00	45.00
Wringer Bases, extra, each,	_	_	-	_		_		-	5.00	5.00
If with Porcelain Legs, as in S-1, add for each									6.75	3.75

# CLOW'S "YORKSHIRE" LAUNDRY TUBS.

#### BROWN VITRIFIED WARE.



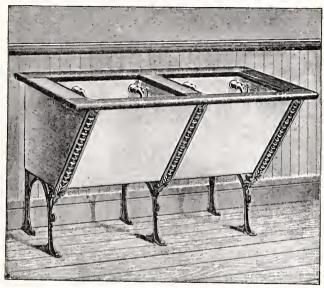
S-10.

Yorkshire Roll-rim Laundry Tubs with Galvanized Iron Legs, Hardwood Cap. 11-inch Polished Brass Plugs with Couplings and Rubbe Stoppers, and \$-inch Brass Fuller Wash Tray Bibbs.

Two-part, complete as described,					_									\$38.0
(10)									-			-	-	400.0
Three-part, complete as described,		_												50.04
				-	-			-	-		-	-	-	00.01
Two-part, complete as described, v	rith	State	Rack .	Shelf	and R	diara	Ende							44 0
										-				44.0
Three-part complete as described	20711	h Class	Danle	Chal-	f and	T) 4	. T2 - 3.							01

# CLOW'S "YORKSHIRE" LAUNDRY TUBS.

#### BROWN VITRIFIED WARE.



S-12.

Includes Yorkshire Tubs with Galvanized Iron Legs and Ash Frame, 14-inch Brass Plugs and \$\int\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\rightarrow{1}\right

rice, as described, per set of Two Tubs,										400.00
rice, as described, per set of Three Tubs,				•		-				<b>\$</b> 28 00
per des et kinee 1 abs,	-	-	-					-		42.00

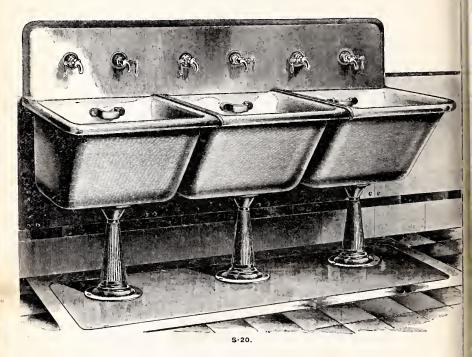
## SIZE - OUTSIDE MEASURE.

Length, 26 inches; width, 24 inches; depth, 17 inches.

Each Tub composed of one solid piece of hard-burned earthcoware, 11 inches thick, and covered inside and outside with a thick brown glaze Non-absorbent, inexpensive, durable as iron.

Being made in one piece, without joints, they overcome the objectionable points in slate or soapstone tubs.

# CLOW'S ENAMELED IRON ROLL-RIM LAUNDRY TUBS.



Enameled Iron Roll-rim Laundry Tubs with 15-inch Enameled Roll-rim Back, Soap Cups, Nickel Plated Brass Union Strips, § incb Fuller Wash Tray Bibbs, Nickel Plated Brass Plugs with Ruhber Stoppers and Couplings.

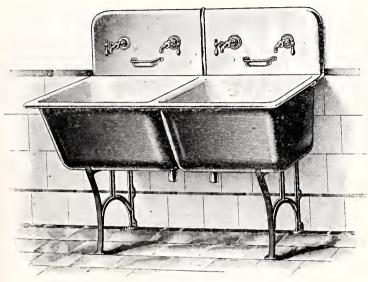
### DIMENSIONS.

Inside, front to back, 22 inches; outside, front to back, 264 inches; width inside, 24 inches; beight from floor to top of rim, 80 inches; set of two Tubs, length over all, 65 inches; set of three Tubs, length over all, 82 inches.

			PRIC	ES.			With Backs,	Without Ba	cks.			
Price as described, per set of Three Tubs	-	_				-	-	-	-	\$62.40	\$51.90	
Price as described, per set of Two Tubs, .		-			-		-	-	-	41.60	34.60	,
If with Brass Patent Overflow, add, each Tub,	-		-	-		-	-	-	-	\$1.2		1
Hard Wood Wringer Bases, extra, each,			-	-		-	-			1.6	00	- 1

Laundry Tuha will be sent drilled for Faucets unless otherwise ordered.

# CLOW'S ENAMELED IRON LAUNDRY TUBS.



S-22.

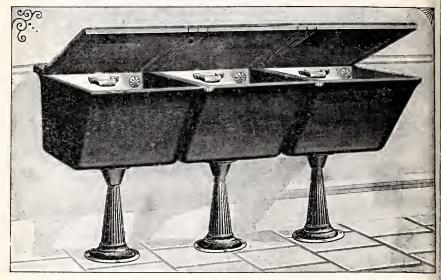
Enameled Iron Laundry Tubs with 12-incb Enameled Backs and Nickel Plated Brass Union Strips, Enameled Soap Cups, Painted Iron Legs, 2-inch Brass Fuller Wash Tray Bibbs, Plugs with Rubber Stoppers and Couplings.

		,					With Backs.	Without Backs.
Price, as described,	_				-	-	\$41.00	\$34.00

SIZE, OUTSIDE MEASUREMENT-Length, 4 feet 2 inches; width, 25 inches; depth, 15 inches.

The above two-part Laundry Tub is cast in one piece, thus combining economy of space with beauty of outline. This Tub permits the use of an ordinary wringer, no special attachment being necessary.

## CLOW'S ENAMELED CAST IRON LAUNDRY TUBS.



S-25.

Enameled Iron Laundry Tubs and Soap Cups, Brass Patent Overflow with Niekel Plated Strainers and Chains, Nickel Plated Plugs with Rubber Stoppers, and Hard Wood Covers.

#### DIMENSIONS.

Inside from front to back, each tub, 22 inches. right to left, 24 inches; depth, 144 inches, height from floor to top of rim 30 fuches.

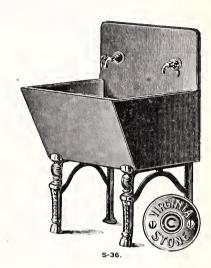
Lids, 29 inches deep, 26 inches wide each.

			PRIC	ES.						
Price, as described, per set of Three Tubs,									843	2.7
Price, as described, per set of Two Tubs,									2	8.5
1-inch Fuller Wash Tray Bibbs, extra, each,									. :	1.0
If without Hard Wood Covers, deduct for each	h cove	r							:	2.0

Tubs will be sent drilled for Faucets, unless otherwise ordered.

# CLOW'S "VIRGINIA" STONE OR SLATE LAUNDRY TUBS.





#### LAUNDRY TUBS.-S-35.

Includes Laundry Tub. Iron Legs, Ash Cover and 14 inch Polished Brass Plug with Locknut and Coupling

List No.	Length.	Width	Deptů.	Complete, with Painted Legs	Complete, with Galvanized Legs
1 2	24 inches.	24 inches.	16 inches.	10.25	11.50
	30 inches.	24 inches.	16 inches.	11.50	12.75

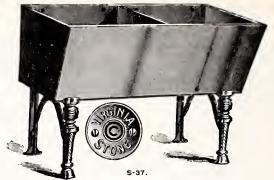
If with \$-inch Fuller Wash Tray Bibbs, add for each Bibb \$1.00.

### LAUNDRY TUBS.-S-36.

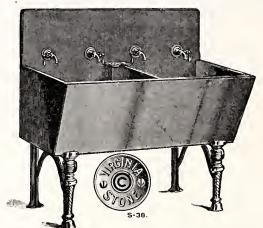
Includes Laundry Tub with 12-inch Back, Iron Legs, 14-inch Polished Brass Plug with Locknut and Coupling, and \$\frac{1}{2}\cdot \text{inch Fuller Brass Bibbs}.

List No.	Length.	Widtb	Depth.	Complete, with Painted Legs.	Complete, with Galvanized Legs.
3 4	24 inches.	24 inches.	16 inches.	13.25	14.50
	30 inches.	24 inches.	16 inches.	15.00	16.25

### CLOW'S "VIRGINIA" STONE OR SLATE LAUNDRY TUBS.



Includes Two Laundry Tubs, Iron Legs, and 11-inch Polished Brass Plugs with Locknuts and Couplings.

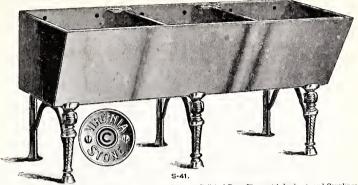


Includes Two Laundry Tubs with 12-inch Back, Soap Cup, Iron Legs, 14-inch Polished Brass Plugs with Locknuts and Couplings, and 4-inch Fuller Brass Wash Tray Bibbs.

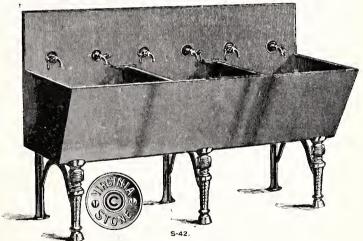
### LAUNDRY TUBS.-S-37 and S-38.

				S-	37.	S-38.			
List No.	Length	Width	Depth	Complete, with Painted Legs.	Complete, with Galvanized Legs.		Complete, with Galvanized Leg		
5 6	48 inches. 54 inches.	24 inches. 24 inches.	16 inches. 16 inches.	14.50 18.25	15 75 19 50	22.00 25.75	23.00 27.00		

# CLOW'S "VIRGINIA" STONE OR SLATE LAUNDRY TUBS.



Includes Three Laundry Tubs, Iron Legs, Soap Cups and 11-inch Polished Brass Plugs with Locknuts and Couplings.



Includes Three Laundry Tubs, with 12-inch Back, Soap Cups, Iron Legs. 14-inch Polished Brass Plugs with Locknuts and Couplings, and 4-inch Fuller Brass Wash Tray Bibbs.

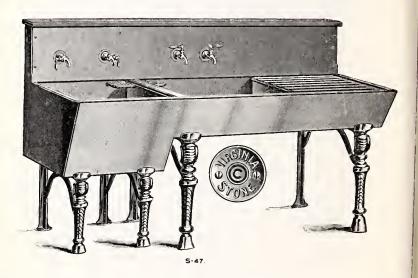
#### LAUNDRY TUBS .- S-41 and S-42.

ſ					S-	41.	S-42.		
	List No.	Length	Width.	Depth.	Complete, with Painted Legs.	Complete, with Galvanized Legs.	Complete with Painted Legs.	Complete, with Galvanized Legs.	
	7 8 9	72 inches. 78 inches. 84 inches.	24 inches. 24 inches. 24 inches.	16 inches. 16 inches. 16 inches.	27.75 32.00 34.75	29.50 33.75 36.50	38.75 43.00 45.75	40.75 45.00 47.75	

S-41 If with &-inch Fuller Wash Tray Bibbs, add for each Bibb \$1.00.

# CLOW'S COMBINATION LAUNDRY TUBS AND SINKS.

"VIRGINIA" STONE OR SLATE.



Kitchen Sink with Drain Board on Right Hand End and one-part Laundry Tub on Left Hand End, 12-inch Back, Shelf and Return End;
Galvanized Soap Cups, Iron Legs, Polished Brass Sink Strainer, 14-inch Polished Brass Tray Plug with
Locknut and Coupling and \$4\text{nch Fuller Brass Sink and Wash Tray Bibbs.}

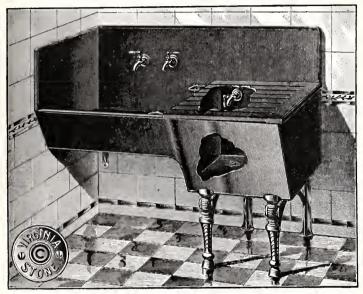
S-48. Kitchen Sink with Drain Board on Left Hand and one-part Laundry Tub on Right Hand End, otherwise complete as described above.

### DIMENSIONS AND PRICES.

List No	Size of Sink.	Length of Drain Board.	Size of Tub.	Total Length	Complete, with Painted Legs	Complete, with Galvanized Legs.
10	24 x 30 x 8 in.	18 inches.	24 in.	6 feet.	43 50	45.50
11	24 x 30 x 8 in.	24 inches.	24 in.	6 feet 6 in.	44.50	46.50
12	24 x 36 x 8 in.	24 inches.	24 in.	7 feet.	45.50	47.50
13	24 x 30 x 8 in.	18 inches.	48 in., two-part.	8 feet.	51.50	54.75
14	24 x 30 x 8 in.	24 inches.	48 in., two-part.	8 feet 6 in.	52.50	55.75
15	24 x 30 x 8 in.	24 inches.	48 in., two-part.	9 feet.	53.50	56.75

## CLOW'S COMBINATION LAUNDRY TUBS AND SINKS.

"VIRGINIA" STONE OR SLATE.



S-50.

Kitchen Sink with Left Hund End und One-part Laundry Tub. 12-inch Back, Galvanized Soap Cup, Iron Legs and Bracket, Polished
Brass Sink Strainer, 14-inch Polished Brass Tray Plug with Locknut and Coupling, \$-inch Fuller
Brass Sink and Tray Bibbs and Oak Drain Board.

#### DIMENSIONS AND PRICES.

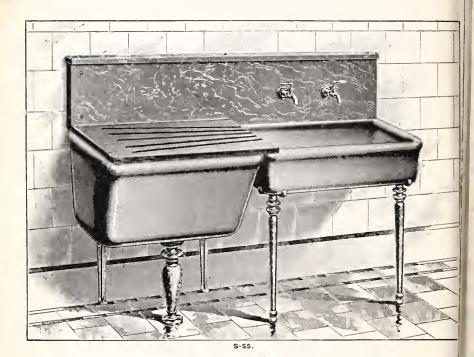
List No.	Size of Sink. Size of 7		Total Length.	Complete, with Painted Legs.	Complete, with Galvanized Legs.		
16	24 x 24 x 8 inches.	24 inches.	4 feet.	25.00	26.00		
17	24 x 30 x 8 inches.	24 inches.	4 feet 6 inches.	29.00	30.00		

If without Oak Drain Board, deduct \$1.75. If without Left Hand End, deduct \$1.75.

S-51. Sink and End on Right of Tub, otherwise complete as described above, same price.

# CLOW'S "YORKSHIRE" COMBINATION LAUNDRY TUBS AND SINKS.

BROWN VITRIFIED WARE.



"Yorkshire" Roll-rim Kitchen Sink and Laundry Tub with 12-inch Tennessee Marble Back, Shelf and Return Ends, Galvanized Iron Leg
14-inch Polished Brass Sink and Tray Plugs with Locknuts and Couplings, 4-inch Fuller Brass Sink
and Wash Tray Bibbs and Oak Drain Board.

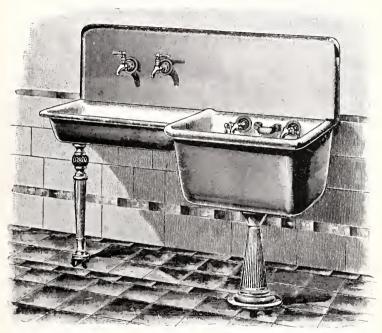
#### DIMENSIONS AND PRICES.

List No.	Size of Sink.	Size of Tub.	Total Length	Price, Complete.
1	22 x 30 x 8 inches.	24 x 30 inches.	5 feet.	46.00
2	22 x 36 x 8 inches.	24 x 30 inches.	5 feet 6 inches.	50.00
3	22 x 42 x 8 inches.	24 x 30 inches.	6 feet.	56.00

in his line

# CLOW'S COMBINED LAUNDRY TUBS AND SINKS.

PORCELAIN LINED. ROLL-RIM.



S-60.

Enameled Iron Roll-rim Laundry Tub and Sink combined, 15-incb Enameled Back, Nickel Plated &-incb Sink and Wasb Tray Bibbs, Nickel Plated Brass Plug and Rubber Stopper.

#### DIMENSIONS AND PRICES.

Size,							
						20 x 30	20 x 36
Price as described one Sink and The The						\$46.75	\$48.25
If with Ash Drain Board to cover Laundan Tub, add to list,				-	-	75.50	77.00
If with Ash Drain Board to cover Laundry Tub, add to li		-		-			2.00
and to cover made any run, and to it	st,	-					2.00

Note-Sink can be furnished on right of Tub if desired. Always sent as shown and described unless otherwise specified.

# CLOW'S COMBINED LAUNDRY TUBS AND SINKS.

PORCELAIN LINED. ROLL-RIM.



S-61.

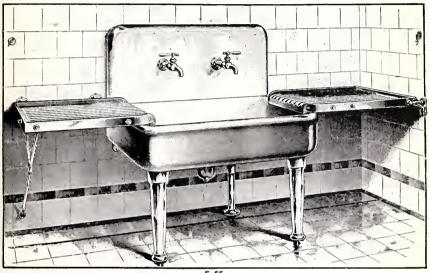
Enameled Iron Rull-rim Laundry Tub and Sink combined, 15-inch Enameled Back and End, Nickel Plated ||-inch Sink and Wash Tray Bibb Nickel Plated Brass Plug and Rubber Stopper.

### DIMENSIONS AND PRICES.

											20 x 30	20 x
Size, .	-			-	-	-	-	•		•	\$49.25	<b>\$50.</b>
Price as described, one Siuk and one Tub,			-	-	-	-			-	-	78.00	79.
Price as described, one Sink and two Tubs.		-		-		-		-	-	-		2.
To with Detent Overflow in Tub, add to list,	-			٠				-	-	-		2.
If with Ash Drain Board to cover Laundry T	ub,	add to	list,	-	-	-	-	-		-	_	1

Nutz. -- Sink and End can be furnished on right of Tub if desired. Always sent as shown and described unless otherwise specified.

### CLOW'S ROYAL PORCELAIN KITCHEN SINKS.



S-65.

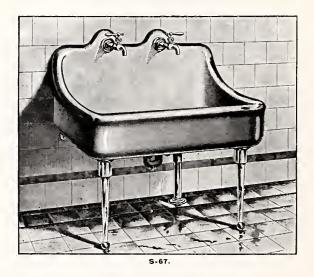
Royal Porcelain Roll rim Kitchen Sink, with 18-inch Porcelain Back and Legs, Nickel Plated Fuller Bibbs, and Trap with Vent, 30-inch Oak Drain Boards, Nickel Plated Hinges and Adjustable Support.

	-	HICES	•			
Size of Sink				Width of Drain Boards.	Class A.	Class B.
20 x 30 x 7 inches,				. 194 inches, .	<b>875.50</b>	\$64.50
23 x 36 x 7 inches,				21½ inches, .	79.25	67.25
24 x 42 x 7 inches,				224 inches, .	89.75	71.50
24 x 48 x 7 inches,				22½ inches, .	97.50	76.00
If without Drain Board with End Hinges, deduct					. \$10	.00
If without Drain Board with Adjustable Support, ded	uct				. 13	.00
If with Soap Cup, add					. 1	.00

Dimensions of Sinks are outside, except depth, which is inside.

Nothing could be more sultable and attractive for Kitchen Sinks than Royal Porcelain, the increased demand for which has led us to perfect the ware until it is now vastly superior to Marble. Enameled Iron and all other materials used for sanitary appliances. Its hard, smooth glaze presents an unbroken, highly fluished surface which renders it, unlike Marble, entirely Impervious to grease and other stains, while it is easily kept clean and is practically indestructible. Moulded in one piece with free, rounded corners, the longment of foreign matter is impossible as there are no angles or crevices. The Porcelain Legs not only add to the heauty and strength of the fixture, but obviate the polishing necessary for metal

### CLOW'S ROYAL PORCELAIN KITCHEN SINKS.



Royal Porcelain Roll-rim Kitchen Sink with High Back, Nickel Plated Fuller Bibbs, 14-inch Trap with Vent, and Bronzed Iron Legs.

### PRICES.

										_ }
Size of Sink.									Class A	Class B.
20 x 30 x 7 inches,	_			_			-		\$48.00	<b>\$36.00</b>
23 x 36 x 7 inches					-				54.00	40.00
24 x 42 x 7 inches.						-			63.00	45.00
If with Porcelain Legs, add									8.00	4.00
If with Nickel Plated Brass		add							5.00	5.00

Oak Drain Board with End Hinges, add \$10.50; Oak Drain Board with Hinges and Adjustable Support, add \$13.50. Dimensions of Sinks are outside, except depth, which is inside.

What has been said of Royal Porcelain on previous pages is alike applicable to this fixture. The Sink and Back are made in one solid piece and are, therefore, rendered free from broken or angular surfaces, which are always hard to keep clean

In firing, some of these Sinks become marked with small spots or lines which in no way affect the practical qualities or general appearance of the fixtures. These are known as Class B, and are recommended when economy is a consideration.

### CLOW'S "YORKSHIRE" KITCHEN SINK.

#### BROWN VITRIFIED WARE.



S-80.

Includes Roll-Rim Yorkshire Sink with Glazed Back, 2 inches Thick, Galvanized Iron Legs, 11-inch Brass Plug, 4-inch Fuller Flange and Thimble Bibbs,

#### DIMENSIONS AND PRICES.

Size, Outside Measure,	-		-				Inches	36 x 22 x 8	42 x 22 x 8
Price, complete as above,		-		-	-	-		<b>\$25.00</b>	\$30.00

These sinks are composed of one solid piece of hard burned earthenware, 2 inches thick and covered on the inside and outside with a thick brown glaze,

Being made in one piece, without joints, they overcome the objection in slate or soapstone sinks.

# CLOW'S ROYAL PORCELAIN KITCHEN SINKS.



001055

					,	With:		er and	pling.				Class A.	Class B.
Size of Sink.							~ • • • • • • • • • • • • • • • • • • •		 				\$13.25	\$10.25
20 x 30 x 7	-												20.00	13.00
23 x 36 x 7									•	•	-		26.50	16.50
24 x 42 x 7		-	-	-							-		34 50	21 50
24 x 48 x 7				-		-					,			



S-88.

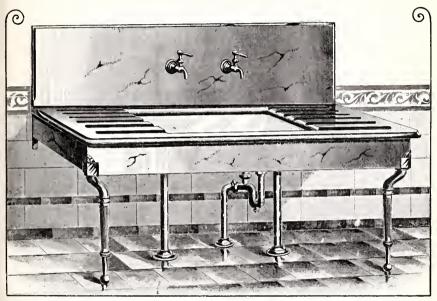


Wood Sink Mat.

Royal Por	eel	ain	Rec	esse	ed P	ant	ry S	ink	with Ideal	Waste.	Size of Mat.			Size of Sink. 48 inches		Price. 83.25
					PR	ICE	ş.				17 x 31			42 inches		2.75
Size of Sink.									Class A.	Class B.	16 x 25			36 inches		2.00
17 x 24 x 6									\$13.00	<b>8</b> 10 00	12 x 22		-	30 inches		1.35
17 x 28 x 7	•					Ċ			14.75	11.75	10 x 18			28 inches		1.00
20 = 30 = 7	•		•	•	•				16 50	13.00	9 x 14			24 inches		1.00

8-91. These Mats are designed for use in the bottoms of Porcelain Sinks and on Marble Drain Boards, and are made of Hardwood Slats firmly joined by Brass Rods. They not only prevent breakage of China, but also protect the highly finished surfaces of fixtures.

### CLOW'S PORCELAIN KITCHEN SINKS.



S-95.

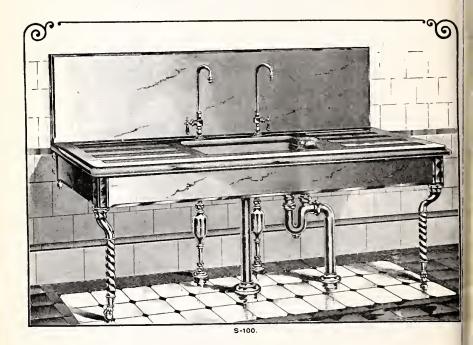
Includes Porcelain Kitchen Sink, with tl-inch Countersunk Marble Top and 20-inch Double Drain-hoard, Marble Back 18 inches high, and 8-inch Aprons, Front and Ends. Nickel-plated Brass Offset Legs, Apron Supports, 14-inch Nickel-plated Brass Trap, with Waste to Floor and Vent to Wall, Nickel-plated Brass Supports, 14-inch Nickel-plated Brass Trap, Fuller Plain Bibbs, with Flange and Thimble, complete.

### DIMENSIONS AND PRICES.

Size of Sink,	-				-	-		_	_					Inches	30 x 20	36 x 23
Depth of Sink,					-	-			_		_			Inches	7	7
Length of Marble,				-	-	_	-	-			_	_	-	Inches	66	72
Width of Marble,	-		-	-	-		-	-	-					Inches	25	28
Price as described,	with	Italian	Marble,	-				-	-	-	-				\$87.00	\$100.00
Price as described,	with	Pink '	Tennessee	Mark	ole,	-		-			-				87.00	100.00

Above can also be furnished with Right or Left Hand End. .

### CLOW'S PORCELAIN PANTRY SINKS.



Porcelain Pantry Sink with 11-inch Countersunk Marble Top and 20-inch Double Drain Board, 18-inch Back and 8-inch Aprons; Nickel Plate Ideal Standing Waste, Nickel Plated Brass Offset Legs, Apron Supports, 11-inch Trap with Waste and Vent, Nickel Plated
Brass Support, No. 2 Fuller Pantry Cocks, and Supply Pipes with Air Chambers.

#### DIMENSIONS AND PRICES.

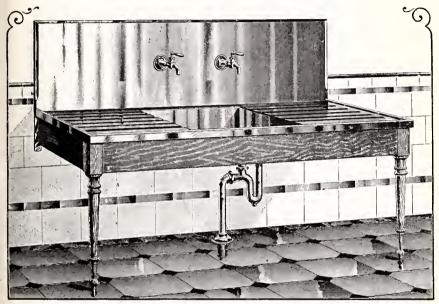
Size of Sink						-			Inches	23 x 16	24 x 17	28 x 17	30 x 20
Length of Marble,							-	•	Inches	60 22	60 24	0.4	66
Width of Marble,						-	-	-	Inches	\$89.00	\$92.00	896.00	\$102.0
Price as described, with	Italian	or	Tenn	essee	Marbi	e,				e05.00	€34.00	\$50.00	420410

S-101. Same as above, with Right Hand End, same price.

S-102. Same as above, with Left Hand End, same price.

## CLOW'S "AJAX" WHITE METAL PANTRY SINKS.

### WITH DRAIN BOARDS

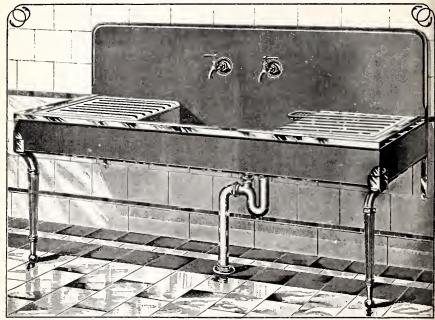


S-105.

"Ajax" White Metal Pantry Sink with Connected Overflow and Waste, Hardwood Back and Grooved Drain Boards covered with White Metal, Oak Frame and Turned Legs, 14-inch Nickel Plated Trap with Vent, and 2-inch Nickel Plated Fuller Faucets.

#### DIMENSIONS AND PRICES.

Size of Sink, . Length over all,								Inches Inches		16 x 24 66	16 x 30 72	18 x 30 72	20 x 30 72
Width over all,							-	Inches	21	23	23	25	. 27
Price, complete as	descr	ibed,							865.00	866.00	872.00	876.00	887.00
If with Copper inst	ead of	f "Aja	x " Y	Vhite	Metal,	-			42.50	43.50	48.00	50.00	54 50



S-110

Kitchen Sink with 8-inch Aprons, 20-inch Back, 18-inch Grooved Drain Boards, Polished Brass Rim, Galvanized Iron Legs and Fram
14-inch Polished Brass Trap with Waste and Vent, Polished Brass Fuller Bibbs and Soap Cup.

#### DIMENSIONS AND PRICES.

Size of Sink,			20 x 30 66	20 x 36 72		22 x 48 84	24 x 4
Price as described, Price as described, without		\$40.50 35.25			\$46.25 39.75	\$50.00 43.25	\$51.( 44.(

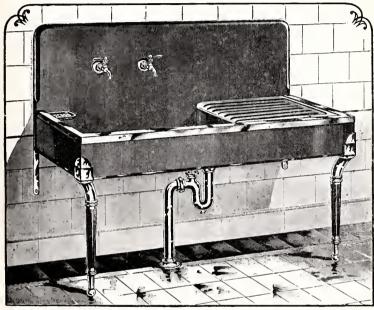
If with Polished Brass Legs and Brackets and Bronzed Iron Frame, add \$11.25.

If without Soap Cup, deduct 50 cents.

If without Brass Trap, deduct \$5.00.

S-111. Same as above, with Right Hand End, same price.

S-112. Same as above, with Left Hand End, same price.



S-115.

Kitchen Sink with 8-inch Aprons, 16-inch Back. 24-inch Grooved Drain Board, Polished Brass Rim, Galvanized Iron Legs and Frame, 14-inch Polished Brass Trap with Waste and Vent, Polished Brass Fuller Bibbs and Soap Cup.

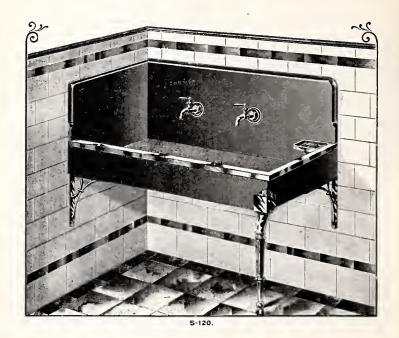
#### DIMENSIONS AND PRICES.

						Inches,	18 x 24	20 x 30	20 x 36	20 x 40	22 x 42	22 x 48	24 x 48
Total Length,		-	-		-	Inches,		54	60	64	66	72	72
Price, as described,	÷		-	-	-		33.50	35.25	36.75	38.25	39.50	41.50	43.00
Price, as described,	withou	t Pol	ished	Brass	Rin	α, .	29.00	30.00	31.25	32.50	33.50	35.00	36.50

If with Polished Brass Legs and Brackets and Bronzed Iron Frame, add \$11.25, if without Soap Cup, deduct 50 cents; if without Brass Trap deduct \$5.00

S-116. Same as above, with Right Hand End, same price.

S-117. Same as above, with Left Hand End, same price.

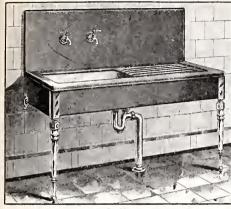


Kitchen Sink with 8-inch Aprons, 16-inch Back and End, Polished Brass Rim, Galvanized Leg and Nickel Plated Steel Brackets, Polished Brass Fuller Bibbs, and Soap Cup.

#### DIMENSIONS AND PRICES.

Sizo of Sink,				Inche	38,	18 x 24	20 x 30	20 x 36	20 x 40	22 x 42	22 x 48	24 x 4
Price, as described,	-					\$17.75	*19.75	\$20.25	<b>\$</b> 22.00	\$23.50	\$25.00	\$26.2
Price, as described,	without	Polished	Brass	Rim,		15.50	17.00	17.50	18.50	20.00	21.50	22.2

If with Brass Leg and Brackets and Bronzed Iron Frame, add \$7.25; if with Polished Brass Trap, add \$5.00; if with out Soap Cup, deduct 50 cents.



S-125.

S-125. Enameled Iron Kitchen Sink with "Virginia" Stone or Slate Top. 8-inch Aprons, 16-inch Back, 24-inch Drain Board, Galvanized Iron Legs, Polished Brass Fuller Bibbs, and Trap with Vent

Size of Iron	Sink.			ng Sla	th of h.		idth of Slah.	Price, as described.
18 x 30 x 6		4-	feet	6	inches,	22	inches,	\$37.75
20 x 30 x 6		4	"	6	4.6	24	46	38.00
20 x 36 x 6		5	* 6	0	4.6	24	46	41.50
20 x 40 x 6		5	**	4	**	`24	6.6	43.50
22 x 42 x 6		5	**	6	44	26	4.6	45.75

If with Polished Brass Legs, add \$7.25.
If without Polished Brass Trap, deduct \$5.00.

For Hardwood Mats, to be used either in the Sink or on the Drain Board, see page 432



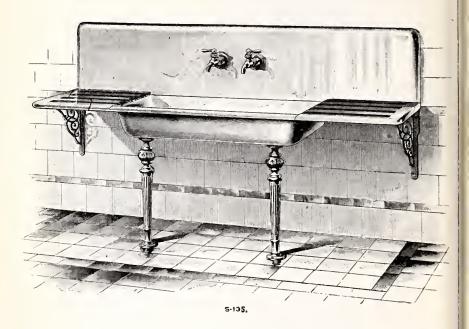
S-130.

S-130. "Virginia" Stone or Slate Kitchen Sink with 8-inch Aprons, 16-inch Back, Polished Brass Rim, Soap Cup, Strainer and Fuller Bibbs, Galvanized Legs and Brackets.

Size of Sink.					Price, as described.	Price, without Brass Rim.
18 x 24 x 8	inches,				\$29.50	\$25.00
20 x 30 x 8	4.4				31.00	26.00
20 x 36 x 8	+6	-			32.50	27.00
20 x 40 x 8	* 4	_			34.00	28.25
22 x 42 x 8	4.4				35.50	29.50
22 x 48 x 8	4.6	_	_		37.00	31.00
24 x 48 x 8	11	_		_	39.00	32.50

If with Polished Brass Legs and Brackets and Bronzed Iron Frame, add \$11.25,

If with Polished Brass Trap, add \$5.00.

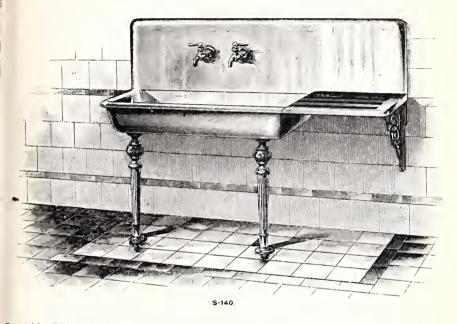


Enameled from Roll-rim Sink, 15-inch Back with Air Chambers, Painted from Legs and Brackets, two Drain Boards, and Nickel Plated Fuller Bibbs.

#### PRICES.

					Bac	ks, on	Becou	nt of i	e <b>ngth</b> ,	arc in	two p	deces.	0:	With 18-inch ak Drain Boards.	With 24-inch Enameled Drain Boards.
Size of Sink														\$27.25	<b>\$</b> 35.00
18 x 30.	as s	hown	and	described,		-		-			-	-	-	-	\$30.00 j
18 x 36,		44	4.6	4.6									-	28.75	
- ,						-								28.25	37.00
20 x 30,	4.4	6.6	14	44	-			-	-	-	-	-			
20 x 36,	4.4	4.4	4	4.4	_						-	-	-	29.75	38.75
20 x 40.		4.6	14	44					_					31.25	
,						-	•	•	-	-				30.25	1
22 x 36,	6.6	6 4	4.6	44						-			-		
22 x 42.		**	**	44						-				31.75	

Air Chambers are tapped for 1-inch Supply and 2-inch Faucets.



Enameled Iron Roll-rim Sink, 15-inch Back with Air Chambers, Painted Iron Legs and Brackets, Drain Board and Nickel Plated Fuller Bibbs.

### PRICES.

Size of Sink	<b>3</b> .			Back	s up	to 5	feet	t are	in on	e piece	, over	5 feet,	in tw	o piec	es.		With 24-inch ak Drain Board.	With 24-inch Enameled Drain Board.
18 x 30,	88	shown	and	described.			_				_		_			-	\$23.50	\$26.00
18 x 36.			64	44					-		-	-	-		-	-		
			4.6		-		-	-		-	-	-	-		-		25.00	
20 x 30,			.,	**	-		-		-	-		-	-			2	24.50	27.00
20 x 36,			4.6	"	-			-		-	_						26.00	28.75
20 x 40,	44	66	6.6	+ 6			_		_			_					27.50	
22 x 36.		66	**	6.6								-		-	-	-		
			66	**	-		-	•	-	-		-	-	-	-	-	26.50	
22 x 42,		••	**	**	-		-					-	-	-			28.00	

Air Chambers are tapped for 1-inch Supply and 1-inch Faucets.

S-141. Same as above, with Drain Board on Left Hand End, same price.



Enameled Iron Roll-rim Sink, 15-inch Back with Air Chambers and Left Hand End, Painted Iron Legs and Bracket, Drain Board and Nickel Plated Fuller Bibbs

					PRIC	ES.						With 24-inch	With 24-in
Size of Sinks.	Backs up to 5	feet	are in one	piece;	over	5 feet,	two	pieces.				Oak Drain Beard	Enamele Drain Bos
18 x 30, as shown and	described,					-		-				\$26.50	\$28.5°
18 x 36, " " "	6.6											28.00	*****
20 x 30, " " "	* *										-	27.50	29.7
20 x 36, " " "	4.6											29.00	31.5
	4.4	-		-						_		30.50	
20 x 40,	44	-			•	-	•	•			Ċ	29.50	
22 x 36,		~			-	-		•	•	-		31.00	
22 x 42, " " "	**							-		-	-	31.00	*****

Alr Chambers are tapped for 4-inch Supply and 4-inch Faucets.

S-146. Same as above, with Drain Board on Left and End Piece on Right of Sink, same price.





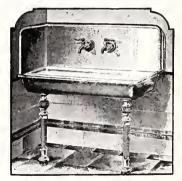
S-15D.

S-151.

SIZE INCHES	18 x 30	18 x 36	20 x 30	20 x 36	20 x 40	22 x 36	22 x 42
S-150. GALVANIZED S-150. ENAMELED S-151. GALVANIZED S-151. ENAMELED	12,25	13.75	13.25	14.25	15.75	14.75	16.25
	16,25	17.75	17.25	18.75	20.25	19.25	20.75
	14,25	15.75	15.50	16.50	18.25	17.25	18.75
	18,75	20.25	20.00	21.50	23.00	22.25	23.75



S-155.



S-156.

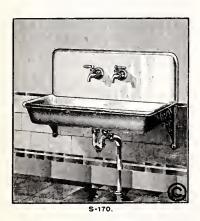
SIZE INCHES	18 x 30	18 x 36	20 x 30	20 x 36	20 x 40	22 x 36	22 x 42
S-155. GALVANIZED	12.75	14.25	13.75	14.75	16.25	15.25	16.75
	16.75	18.25	17.75	19.25	20.75	19.75	21.25
	14.50	16.00	15.75	16.75	18.50	17.50	19.00
	19.00	20.50	20.25	21.75	23.25	22.50	24.00

If without Faucets, deduct \$2.25. Price includes Air Chambers, tapped for 4-inch Supply and 3-inch Faucet.

### CLOW'S "TENAX" WROUGHT STEEL SINKS.

ROLL-RIM.

#### UNSURPASSED FOR CLEANLINESS, DURABILITY AND BEAUTY.



Roll-Rim-Sink, Enameled Inside and Painted Outside, 15-inch Roll-Rim Enameled Back, Painted Iron Brackets, Nickel Plated ‡-inch Fuller Bibbs and 14-inch Brass S Trap, vented.



5-172.

Roll-Rim Sink, Galvanized Inside and Outside, with 15-inch Roll-Rim Back, Galvanized Brackets, Polished Brass 4-inch Fuller Bibbs and 11-inch extra heavy Lead S Trap, vented.

Our "Tenax" Sinks are drawn from one plate of Steel and are superior to the Cast-Iron Sinks in every particular, being lighter, stronger and more durable. The bottom slopes to the center and the outlet, giving perfect drainage. They are secured to the brackets by a simple device, leaving the rim free from screws.

Every Sink is branded "CLOW'S TENAX," a guarantee of its superiority.

SIZE INCHES	16 x 24	18 x 30	18 x 36	20 x 30	20 x 36	20 x 40
S-170. WHITE ENAMELED, COMPLETE EACH S-172. GALVANIZED, COMPLETE EACH	13.25	15.00	17.00	16.00	18.00	19.25
	5.50	7.50	8.25	8.00	8.75	9.75

Steel Strainer with Rubber Plug for holding water in Sink can be substituted for regular Strainer. Extra, 35 cents net. Sinks furnished with Patent Overflow, extra, 50 cents net.

### WROUGHT STEEL SINKS.







S-176. COLUMBUS ROLL-RIM SINK BACK.

### COLUMBUS ROLL-RIM STEEL SINKS (Brackets Extra).-S-175.

SIZE INCHES	16 x 24	18 x 30	18 x 36	20 x 30	20 x 36	20 x 40
PAINTED.         EACN           GALVANIZED.         EACN           BLUE ENAMELED         EACH           WHITE ENAMELED         EACH	2.70 3.95 4.50 7.55	3.70 5.00 5.70 9.95	$egin{array}{c} 4.45 \\ 6.15 \\ 6.60 \\ 10.95 \\ \end{array}$	4.45 6.15 6.60 10.95	5.50 7.55 7.85 11.90	5.85 8.35 9.45 12.90

Sinks furnished with Rubber Stoppers, extra, each, 25 cents net; Patent Overflow, extra, each, 50 cents net. Brackets, per pair, Plain, \$1.00; Painted, \$1.15; Galvanized, \$1.45; Blue Enameled, \$2.50.

### COLUMBUS ROLL-RIM SINK BACKS (15 Inches High).-S-176.

WIDTH INC	ES 24	30	36	40
PAINTED         E.           GALVANIZED         E.           BLUE ENAMELED         E.           WHITE ENAMELED         E.	CH 2.20 CH 3.10	1.90 2.60 4.10 5.00	2.20 3.00 5.10 6.00	2 60 3.50 6.20 7.10



S-180. COLUMBUS STEEL SINK.



S-181. COLUMBUS SINK CONNECTION.

#### COLUMBUS STEEL SINKS .- S-180.

SIZE INCHES	16 x 24	18 x 30	18 x 36	20 x 30	20 x 36	20 x 40
PAINTED . EACH GALVANIZED . EACH WHITE ENAMELED . EACH	1.80 4.00 7.50	2.50 5.10 10.00	3.00 6.50 11.00	$3.00 \\ 6.25 \\ 10.50$	3.70 7.75 12.00	4.00 8.50 13.00











S-181. When sold separate from Sink, each, 50 cents net.

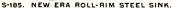
S-182. When sold separate from Sink, each, 75 cents net.

Rubber Plug couplings are made without cross piece for screw shown in ferrule "A."

S-182. IMPROVED BRASS COUPLINGS.

#### WROUGHT STEEL SINKS.







NEW ERA STEEL SINK.

### NEW ERA ROLL-RIM STEEL SINKS. S-185.

SIZE	INCHES	16 x 24	18 x 30	18 x 36	20 x 30	20 x 36	20 x 40
PAINTED GALVANIZED BLUE ENAMELED WHITE ENAMELED	EACH EACH EACH	1.95 2.70 3.25 5.90	2.70 3.55 4.30 7.60	3.25 4.30 4.80 9.45	3.25 4.30 4.80 9.45	4.00 5.10 5.35 11.55	4.30 5.90 6.95 12.65

Sinks furnished with Rubber Stoppers extra, each, 25 cents net; Patent Overflow extra, each, 50 cents net. Brackets, per pair, Plain, \$1.00; Painted, \$1.15; Galvanized, \$1.45; Blue Enameled, \$2.50.

#### ROLL-RIM SINK BACKS (15 Inches High).

WIDTH		 -									17	HCHES	24	30	36	40
PAINTED													1.60	1.90	2.20	2.60
GALVANIZED													2.20	2.60	3.00	3.50
BLUE ENAMELED .												EACH	3.10	4.10	5.10	6.20
WHITE ENAMELED												EACH	4 00	5.00	6.00	7.10

Sink Backs drilled with two Cock Holes unless otherwise ordered.

#### NEW ERA STEEL SINKS .- S-188.

SIZE INCHES	16 x 24	18 x 30	18 x 36	20 x 30	20 x 36	20 x 40
PAINTED         EACH           GALVANIZED         EACH           *BLUE ENAMELED         EACH           WHITE ENAMELED         EACH	1.80	2.50	3.00	3.00	3.70	4.00
	4.00	5 10	6.50	6.25	7.75	8.50
	4.50	6.00	6.75	6.75	7.50	9.75
	7.50	10.00	11.00	10.50	12.00	13.00

\* Enameled inside and outside in a Purplish Blue color.









S-190. Steel Strainer for Rubber Stopper, each, 10 cents net; S-191, Rubber Stopper, each, 25 cents net; S-192, Iro Pipe Connection, 14 or 14-inch, each, 10 cents net; S-193, "New Era" Coupling with Painted Strainer, Screws, Nuts an Washers complete, each, 30 cents net. "New Era" Couplings with Rubber Plug, Screws, Nuts and Washers complete each, 50 cents net. White Metal Stoppers, each, 10 cents net.



#### OVAL STEEL PANTRY SINKS .- S-198.

SIZE, 14 X 20 X 6 WITH NICKEL PLATED	Painted.	Galvanized.	White Enameled.
STRAINER, BRASS COUPLING AND RUB- BER PLUG	2.00	3.50	6.50

Oval Pantry Sinks with Patent Overflow, extra, each, 50 cents net.

#### CAST-IRON SQUARE SINKS.-S-212.



S-212.

18 x 36 20 x 24 20 x 30

Size, Inches.	Painted, Each.	Galvanized, Each.	White Enameled Each.
12 x 18	1.25	1.90	1.90
14 x 20	1.50	2.30	2.30
15 x 27	2.00	2.90	2.90
16 x 24	1 80	2.60	2.60
16 x 28	2.10	3.00	3.00
16 x 30	2 25	3.10	3.10
18 x 24	2.10	2.80	2.80
18 x 30	2 50	3.40	3.40
18 x 32	3.00	3.80	3.80
18 x 36	3.00	3.80	3.80
20 x 24	2.40	3.00	3.00
20 x 30	3.00	3.60	3.60

Size. Inches.	Painted, Each.	Galvanized, Each.	White Enameled Each
20 x 36	3.70	4.10	4.10
20 x 38	3.80	4.40	4.40
20 x 40	4.00	4.60	4.60
20 x 42	4.25	4.80	4.80
22 x 42	4.25	4.80	4.80
20 x 48	5.30	7.40	7.40
22 x 62	10.75	14.00	14.00
22 x 76	15.00	21.00	21.00
24 × 50	7.50	10.25	10.25
24 x 84	17.00		
24 x120	26 00		

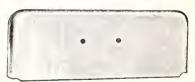
Add to list, if with Patent Overflow: Painted \$1.00; Galvanized, \$1.25; Enameled, \$1.25.

### ROLL-RIM SINK BACKS.-S-215.

SIZE .	INCHES	20	22	24	30	32	36	42	48
PAINTED GALVANIZED ENAMELED	EACH	2.30	2.40	2.60	3 50	3.70	4.20	4.90	$4.25 \\ 5.60 \\ 5.60$

Siuk Backs will always be sent with two cock holes unless otherwise ordered.

Gatvanized Air Chambers, tapped for Iron Pipe, add to list, per pair, \$2.00.



S-215. SINK BACK.







S-219, COUPLING.



S-220. SINK PLUG.



S-221. IRON PIPE COUPLING.



SINK PARTS.

FIGURE	S-218	S-219	S-220
PAINTED EACH GALVANIZED EACH ENAMELED . EACH	.12	.12	.40 .50

Sink Brackets, see page 460.

### I. P. SINK CONNECTIONS.-S-221.

SIZE					INC	HES	11/4	1 ½	2
EACH		-	-			٠	.30	. 40	.50

S-222. Iron Sink Bolts, per package (100), \$2.00. S-222. Short Brass Sink Bolts, per dozen, .60.



S-230. SLOP SINK.

SIZE	INCHES	16 x 16 10	20 x 14 12	20 x 16 12	23 x 15 15	24 x 20 12	30 x 20 12	36 x 20 12	48 x 20 17
PAINTED	EACH EACH	2.70 3 60 3.60	3.50 4.00 4.00	4.00 4.75 4.75	4.25 5.35 5.35	5.00 5.50 5.50	8.00 7.60 7.60	10.00 9.50 9.50	22.00

Add for Patent Overflow, \$1.00; for Patent Overflow and Plug Strainer, \$1.50.



S-235. HALF CIRCLE SINK.



S-236. CORNER SINK.

No.	Back, Inches	Width, Inches.	Painted, Each.	Galvanized, Each	Enameled, Each.
1	24	14	1.50	2.90	2 90
2	27	15	1.80	3.30	3.30
3	29	16	2.00	3.60	3.60
4	31	17	2.25	4.00	4.00

No.	Side,	Front,	Painted,	Galvanized,	Enameled,
	Inches.	Inches.	Each.	Each.	Each.
1	17	25	1.25	2.90	2.90
2	20	28	1.75	3.30	3 30
3	22	31	2.10	3.60	3 60





S-242, OVAL PANTRY SINK.

### COPPER AND GERMAN SILVER PANTRY SINKS .- S-240 and S-242.

SIZE INCH	s 12 x 18	12 x 20	14 x 16	14 x 20	14 x 24	16 x 24	16 × 30	18 x 30
SQUARE, COPPER EA	н 6.00	5.00	4.50	6.00	7.00	8.00	10.00	11.00
OVAL, COPPER EA		6.50	7.00	7.50	9.00	10.00	12.00	13.00
OVAL, GERMAN SILVER EA		11.50	12.50	13.00	16.00	18.00	21.00	23.00







S-245. HARRIS SLOP SINK. S-247. SQUARE SLOP HOPPER.



S-248. ROUND SLOP HOPPER.

### HARRIS SLOP SINKS WITH BELL TRAP .- S-245.

SIZE	12 x 12	14 x 14	16 x 16
PAINTED	2 00	2 25	2 50

### SLOP HOPPERS WITH BELL TRAP. - S-247 and S-248.

3 50



S-250. SEWER TRAP.

. each, \$2.50 16 x 16. Painted.







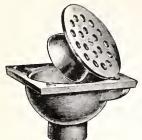
S-258. BAR STRAINER.

### CESSPOOL PLATES.

SIZE	INCHES	6 x G	6 x 8	7 x 9	10 x 10	10 x 12	12 \ 12
S-255	EACH	.40	50				
S-257	EACH	.50	.50	.65	.90	1.05	1.20

#### BAR STRAINERS.

SIZE INCHES	4	5	6	7	8	9
S-258 EACH	. 20	. 25	. 30	. 50	. 65	.80



0.005

# HINGED CESSPOOLS WITH BELL TRAP.-S-265.

Size,	Iron, Painted,	Iron, Galvanized,	Brass.	Brass,		
Inches.	Each	Each	Each.	Nickel Plated.		
6 x 6 9 x 9 13 x 13	1.50 3.75	3.00 7.50	3.50 6.50 12.00			



S-267. SECTIONAL.



S-270. HYDRANT CESSPOOL

#### S-267. BELL TRAP.

### CESSPOOLS.-S-267.

SIZE .			 . INCHES	6 x 6	9 x 9	13 x 13
SIZE OUTLET PAINTED		 	 INCHES	.75	3 1.00	4 2.50

### HYDRANT CESSPOOLS.-S-270.

# HYDRANT CESSPOOLS, BELL TRAP.-S-270

SIZE	INCHES	12 x 12	14 x 14	16 x 16
DEPTH PAINTED	INCHES	6	6	6
	EACH	1.00	1.15	1 30

(LEA)	CONNECT	ION.J	
SIZE INCHES	12 x 12	14 x 14	16 x 16
DEPTH . INCHES	6 1.50	6 1.65	6 1.80



S-272. EXTRA HEAVY CESSPOOL.



S-272. SECTIONAL.

### E. H. CESSPOOL WITH BELL TRAP AND GRATING, (4-INCH OUTLET)-S.272.

SIZE					 									INCHES	16 x 16
DEPTH														INCHES .	10 4.50
GALVANIZED														EACH	10.00

### CLOW'S ROYAL PORCELAIN ROLL-RIM SLOP SINKS.



S-300.

Royal Porcelain Flushing Rim Slop Sink with Nickel Plated Strainer, Brozed Iron Trap Standard, Cherry or Oak Tank, Nickel Plated Wall Guide and Rod with Pull, Flush Pipe, Combination Faucet and Supply Pipes with Air Chambers.

Size, 22 x 22 x 12	Class A.	Class B.	Class C.
Price, as described,	\$76.25	\$62.25	\$54.75
If with Porcelain Trap,	83.25	65.75	56.50
If with Polished Brass Trap.	93.25	79.25	71.75



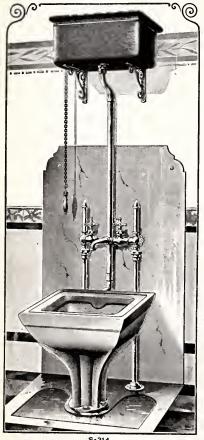
S-307.

Royal Porcelain Slop Sink with Nickel Plated Strainer, Bronzed Iron Trap Standard, Nickel Plated Combination Faucet and Supply Pipes with Air Chambers,

#### PRICE.

Size,	-	_	Class A.	Class B.	Class C.
20 x 16 x 12 inches,		-	\$41.25	\$35.75	\$31.00
22 x 18 x 12 inches,		_	44.50	38.00	32.50
24 x 20 x 12 inches.	_	_	47.00	40.25	33.75

### CLOW'S PORCELAIN SLOP HOPPERS.





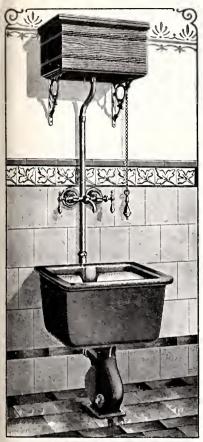
S-321.

S-814 includes Tall Square Flushing Rim Slop Hopper, Nickel-plated Double Compression Faucet, with Supplies to Floor, Round Cornere Single Discharge Siphon Tank, Nickel-plated Flush Pipe, Tank Brackets, Pull and Chain,
Brass Floor Flange, Bolts, and Rubber Gasket.

8-321 includes Short Square Flushing Rim Slop Hopper with Trap, Nickel-plated Brass Vent to Wall, Nickel-plated Double Compression Flush and Supply Faucet, and Supply Pipes to Floor, Brass Floor Flange, Bolts, and Rubber Gasket.

					•	•	-				\$50.00
S-321 Complete as shown,		•	•	•	٠	•	•				45.00

### CLOW'S ENAMELED IRON SLOP SINKS.



S-328.

Euameled Iron Slop Sink with Polished Brass Flushing Rim, Iron Trap Standard with Brass Vent, Brass Fuller Combination Faucet. Flush Pipe with Slip Joint, and Cherry or Oak Tank.

#### DIMENSIONS AND PRICES.

Size of Sink,	Inches	16 x 20	18 x 22	20 x 24	
Depth of Sink,	Inches	12	12	12	
Enameled Inside,		\$40.75	\$43,50	\$45.75	
Enameled In and Out,		45.75	48.75	51.75	



S-335.

Enameled Iron Slop Sink with Polished Brass Rim. Iron Trap Standard with Brass Vent, Brass Combination Faucet and Supply Pipes with Air Chambers.

### DIMENSIONS AND PRICES.

Size of Sink,	Inches	$16 \times 20$	18 x 22	20 x 24
Depth of Sink,	Inches	12	12	12
Enameled Inside.		\$24.00	<b>\$26.00</b>	28.50
Enameled In and Out.		29.00	31.25	34.50

If with Nickel Plated Trimmings, add \$2.00.



### CLOW'S SLOP SINKS.

S-345. Enameled Iron Slop Sink on Trap Standard, with Brass Strainer and Vent Connection.

Size of Sink, .	Inches	16 x 20 x 12	18 x 22 x 12	20 x 24 x
Enameled Inside,		<b>\$19.00</b>	\$20.75	\$22.50 21.25
Galvanized,		17.50	19.50	21.25



S-352,

Enameled Iron Roll-rim Slop Sink on Trap Standard, with Brass Strainer and Vent Connection, Enameled Iron Back with Air Chambers, and Nickel Plated Boston Self-closing Bibbs.

Size of Sink.	Price, as described, Enameled Inside.	Price, as described Galvanized
16 x 20 x 12 Inches,	\$20.75	\$19.00
18 x 22 x 12 Inches.	. 22.50	20.75
20 x 24 x 12 Inches,	. 24.50	22.50

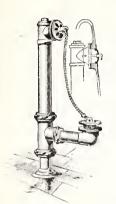


S-360.

Porcelain Roll rim Slop Sink with 16-inch Marble Back, Nick Plated Boston Self-closing Bibbs and Nickel Plated Legs with Extension Brackets.

Size of Sink.			Class A.	Class
20 x 22 x 12 In	ches,		\$37.00	\$34.
20 x 24 x 12 In	ches,	-	40.00	37.

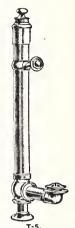
### BATH TUB TRIMMINGS.







T-3.
COMBINED WASTE AND OVERFLOW



IDEAL BATH WASTE

FIGURE	T-1	T-3	T-5
ROUGH BRASS, NICKEL PLATED TRIMMINGS EACH POLISHED AND NICKEL PLATED ALL OVER	4.50	3.25	10 50
	5.00	3.50	11.00

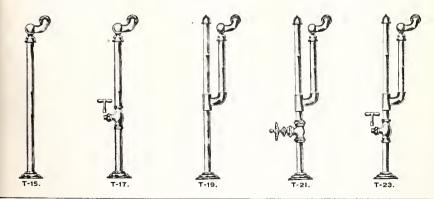
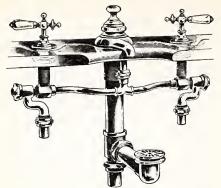


FIGURE	T-15	T-17	T-19	T-21	T-23
NICKEL PLATED PER PAIR	3.50	5.50	7.50	8.00	8.50







T-38. IDEAL BASIN WASTE.

### CORINTHIAN COMBINATION SUPPLY AND WASTE.-T-31.

		_	_	_				_			_		_	 _					
NICKEL PLATED																		EACH	15.00
NICKEL PLATED, WITH CHINA HANDLES										_								EACH	16.50
NICKEL PLATED, WITH ONYX HANDLES															~			EACH	18.50

#### IDEAL BASIN WASTE.-T-38.

4.50 



Four-Arm Handle with Onyx, China or Nickel Plated Arms.





Ball Handle, with China Center. Tulip Handle, Brass, Nickel Plated.



BATH COCK HOLE COVER.



T-45.
BATH OVERFLOW HOLE COVER. T-47. LAVATORY STOP.



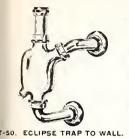


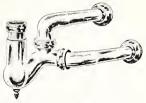
T-48. ANGLE STO

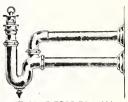
T-44. NICKEL PLATED	 . EACH	. 65
T-45. NICKEL PLATED	. EACH	1 00

### COMPRESSION STOP COCKS FOR SUPPLY PIPES. T-47 and T-48.

SIZE	B	ž	2
NICKEL PLATED	. 75	1.00	1.25

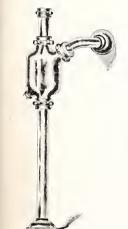




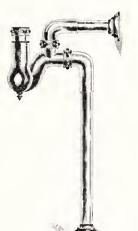


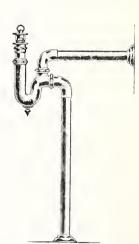
# NICKEL PLATED TRAPS TO WALL.

FIGURE	T-50	T-52	T-54	T-54	T-54
SIZE INCHES NICKEL PLATED . EACH	6.00	7.00	$\substack{\frac{1\frac{1}{4}}{3.50}}$	$\frac{1\frac{1}{2}}{6.50}$	2 12.00









T-64. S TRAP TO FLOOR.

### NICKEL PLATED TRAPS TO FLOOR.

FIGURE	T-60	T-62	T-64	Т-64	T-64
SIZE . INCHES NICKEL PLATED . EACH	6.00	7.00		1½ 6.50	2 12.00

# LAVATORY SUPPLY PIPES.

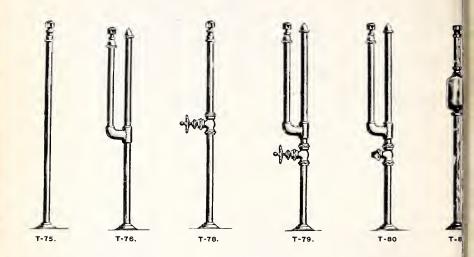


FIGURE	T-75.	T-76.	T-78.	T-79.	T-80.	T-82.
NICKEL PLATED PER PAIR	2.50	4.30	5.30	8.00	8.25	8.00

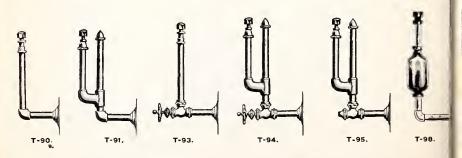


FIGURE	T-90.	T-91.	T-93.	Т-94.	T-95.	T-98.
NICKEL PLATED PER PAIR	3.10	5.10	5.30	8.50	8.75	8.50

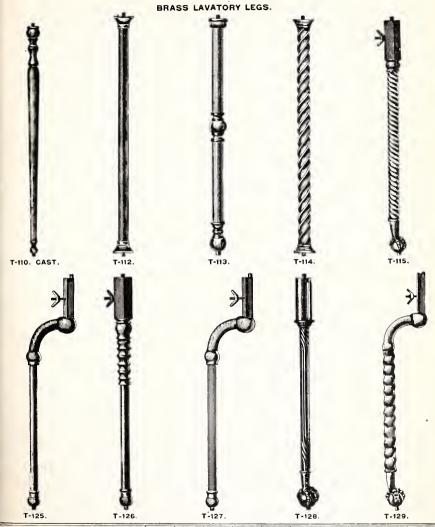
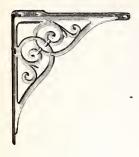
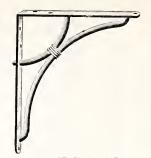


FIGURE	T-110	T-112	T-113	T-114	T-115	T-125	T-126	T-127	T-128	T-129
NICKEL PLATED EACH	5.25	2.00	4.20	2.00	5.00	3.20	4.40	3.20	4.75	6.25

All Legs 281 inches high.



T-150. IRON SINK BRACKET,



T-151. STEEL BRACKET.



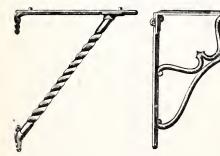
T-152. IRON BRACKET.

### IRON BRACKETS T-150.

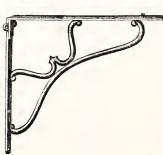
NUM8ER	1 (15 x 16 inches)	2 (16 x 18 inches)	3 (15 x 20 inches)
PAINTED	,36	. 46	.65
GALVANIZED	.54	1.00	1.40
CIVAIRECED	. 00	1.00	1.40

### STEEL AND IRON BRACKETS-T-151 and T-152.

SIZE	4 x 5	7 x 9	8 x 10	9 x 11	12 x 16	16 x 18	20 x 29
NICKEL PLATED EACH	. 15	. 30	. 55	.60	.90	.90	2.60



T-156. BRASS BRACKET.

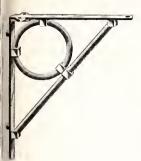


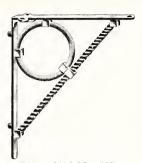


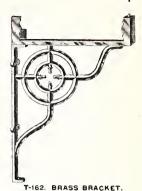
T-157. BRASS BRACKET, T-158. HEAVY BRASS BRACKET

# BRASS BRACKETS, NICKEL PLATED-T-156, T-157 and T-158.

SIZE INCHES	4 x 5	7 x 9	8 x 10	9 x 11	11 x 13	16 x 18	20 x 20
T-157 EACH	,90	1.50	1.75		2.25	2.70	3.50







T-160. BRASS BRACKET.

T-161. BRASS BRACKET.

# BRASS BRACKETS, NICKEL PLATED.

SIZE INCHES	7 x 9	8 x 10	9 x 11	16 x 18	20 x 20	20 x 28
T-160 AND T-161. NICKEL PLATED EACH T-162. FOR 5-INCH APRON EACH	2.50	3 00	3 00	5.00	9.00	10 00
1-102. FOR STINCH APRON EACH		****				10 00





T-168. BRASS BRACKET.

BRACKETS AND APRON BACKS, NICKEL PLATED.

SIZE INCHES	8 x 18	8 x 20	20 x 21½	20 x 23½
T-164*         EACH           T-166. APRON BACK         EACH           T-168. FOR 5-INCH APRON         EACH	3.50 .75	4 00		
T-168. WITHOUT APRON EACH T-168. WITHOUT APRON ATTACHMENT EACH			9.00 8.50	10.00 9.00

<sup>\*</sup> This list does not include any leg. Order style leg wanted. See page 459.

# BATH ROOM AND LAVATORY TRIMMINGS.



T-225. TUMBLER HOLDER.

Nickel Plated, . . . each, \$1.75



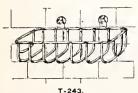
T-231. OVAL HOLDER. FOR SMALL BPONGE.

Nickel Plated, . . . each, \$2.00 5 x 4 inches.



T-237. COMB AND BRUSH TRAY

Nickel Plated, . . . each, \$2.75 Length, 11 inches; width, 4 inches.



COMB AND BRUSH TRAY.

Nickel Plated, \_ \_ each, \$2.00



### T-227. TOOTH BRUSH TRAY.

Nickel Plated, . . each, \$2.00 Length, 8 inches; width, 8 inches.



SOAP OISH. TO ATTACH TO RIM OF BATH

Nickel Pl., for 3-inch Rim, each, \$2.00 Nickel Pl., for 4-inch Rim, each, 2.50



SPONGE HOLDER.

Nickel Plated, . . each, \$3.00 Diameter, 6 inches



TOWEL CLIP.

Nickel Plated, . . . each, .20 Diameter, 2 inches



T-229. TOOTH BRUSH HOLDER.

Nickel Plated, . . each, \$2.0 Height, 5 inches; diameter, 3 inches.



T-235. SOAP AND SPONGE HOLDER. TO ATTACH TO RIM OF BATH.

Nickel Pl., for 3-inch Rim, each, \$4.0 Nickel Pl., for 4-inch Rim, each, 4.5



SPONGE HOLDER.

Nickel Plated, . . . each, \$2.2 Diameter, 54 inches



T-247

SOAP AND SPONGE HOLDER.

Nickel Plated, . . . each, \$2.0



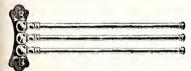
T-256. MIRROR.

	B	eve	led	Plate	Glas	s with	N	icke	1 1	Plated	Bra	ass Fr	ame.
6	X	26	inc	hes,								each,	\$20.00
2	x	30	inc	hes,								each,	25.00
0	X	30	inc	hes,			_					each,	55.00
					Othe	r sizes	m	ade	to	order			



T-263. TOWEL RACK.

Niekel Plated,				-			-	each,	*0.85
	Leng	gth	, 18	in	ches	3.			



T-264. FOLDING TOWEL RACK.

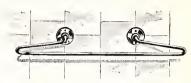
Nickel Plated,		-					cach,	<b>\$4.00</b>
	Len	gth,	18	inc	hes.			



T-265.

TOWEL OR PARCEL TRAY.

Any length to order.



T-266, TOWEL RACK.

Nickel Plated, . . . . . each, \$1.00 Length, 18 inches.



Nickel Plated, . . . . . each, \$1.25 Length, 20 inches.



T-268. TOWEL RACK.

Nickel	Plated,	length	20	inches,		-	each,	\$2.10
Nickel	Plated,	length	30	inches,		-	each,	3.50
Nickel	Plated.	length	36	inches.			each.	4.50



T-269, TOWEL ROLLER.

Nickel Plated, . . . . . . each, \$5 00 Length, 26 inches.



T-270. TOWEL SHELF.

Nickel	Plated,	length	20 inches,				each,	\$3.50
Nickel	Plated,	length	30 inches,				each,	5.25
Nickel	Plated.	length	36 inches.				each.	6.50

### BATH ROOM AND LAVATORY TRIMMINGS.



HOLDER FOR SAFETY MATCHES.

Nickel Plated, . . . each, \$2.25



T-286. MATCH BOX.

Nickel Plated, cach, \$2.00 Height 51 inches, width 32 inches.



T-292, SOAP DISH.

each, \$2.75 Nickel Plated. Length 5 inches, width 3 inches.



T-298. THERMOMETER.

\$1,00 Each, . .



T-282. ROBE HOOK.

Nickel Plated, . . . each, .30



Nickel Plated, . each, \$1. Length 41 inches, width 31 inches.



T-288, MATCH BOX.

Nickel Plated, each, \$1.75 Height 52 inches; width 32 inches.



SOAP DISH, WITH REMOVABLE

. . cach, \$1. Nickel Plated, Length 5 inches, width 3; inches.



T-296. RUBBER SOAP DISH. Each,

Length 34 inches, width 24 inches



T-294. SOAP DISH.

Nickel Plated, . . . each, \$1.75 Length 51 inches, width 31 inches.



T-300. SOAP DISH.

Nickel Plated, each, \$1.75 Length 6 inches; width 4 inches



T-302. SOAP DISH, WITH REMOVABLE

Nickel Plated, . . each, \$2. Diameter 4 inches, height 34 inches,



PAPER HOLDER,

T-310.

### PAPER HOLDERS.



T-312.
PAPER HOLDER,
FOR SHEETS.

T-314.
PAPER HOLDER,
FOR ROLL PAPER.
kal Plated each \$1.7

Nickel Plated, . . each, \$2.75 Nickel Plated, . . each, \$2.50 Nickel Plated, . . . each, \$1.75



T-316.
PAPER HOLDER,
FOR ROLL PAPER.
Nickel Plated, \_ \_ \_ each, \$5.00



T-318.
PAPER HOLDER,
SPRINGFIELD OVAL.

Nickel Plated, Iron, each, \$0.50 Nickel Plated, Brass, each, 1.00



T-320,
PAPER HOLDER,
FOR ROLL PAPER.

Leatherette, . . . each, \$0.40



T-322.
PAPER HOLDER,
FOR ROLL PAPER.

Japanned Iron, . . . each, \$0.25 Nickel Plated, Iron . each, .60



T-324.
KING PAPER HOLDER,
FOR ROLL PAPER.

Nickel Plated, . . . each, \$1.50















V-10. JEWEL CUP.

V-11. JEWEL CUP.

V-25. CHAIN HOLDER.

# CHAIN STAYS, SOAP CUPS AND CHAIN HOLDERS.

FIGURE	V-1	V-2	V-3	V-4	V-10	V-11	V-25
NICKEL PLATED PER DOZEN	2.50	3.75	4 25	6.50	9.00	12 00	6 00







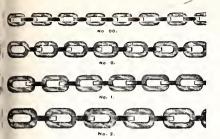
V-30. OVAL SOAP CUP. V

V-32. CAP TO COVER COCK HOLE.

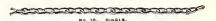
V436

V-36. SLAB SCREW AND WASHER.

FIGURE	V-30	V-32	V-34	V-36	V-36	V-36
SIZE INCHES	36.00	4.50	.75	$\frac{1\frac{1}{2}}{2.00}$	2 2.50	$\frac{2\frac{1}{2}}{3.00}$

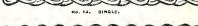


V-38. SAFETY CHAIN.









No. 14. DOUBLE.

V-39. JACK CHAIN.

### SAFETY AND JACK CHAINS.-V-38 and V-39.

NUMBER	00	0	1	2	18 Single.	16 Single.	14 Single.	14 Double.
BRASS PER PACKAGE PLATED PER PACKAGE	1.25	1.50	1.85	2.30	.60	.86	1.35	1.90
	1.35	1.60	1.95	2.40	.94	1.07	1.69	2.37

Twelve yards of chain in each package.



V-42. CHAIN AND SNAPS FOR BASIN, BATH AND WASH TRAY.

V-42	Brass.	Plated.
FOR BASINS, 16 INCHES LONG FER DDZEN FOR BATHS AND WASH TRAYS, 27 INCHES LONG PER DDZEN	1.60	1.10 1.75



V-44. STANDARD.



V-45. CLINCHER.



V-46. MCVEY.



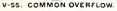
V-47. MAGIC.

### BASIN CLAMPS.

FIGURE	V-44	V-45	V-46	V-47
PER DOZEN	_50	1.00	2.50	2.50

### PLUGS WITH RUBBER STOPPERS.







V-S6. PATENT OVERFLOW.



V-57. WASH-TRAY PLUG.

#### BASIN PLUGS WITH RUBBER STOPPERS.-V-55 and V-56.

SIZE														INCHES	1 ′	1.
V-55.	BRA5S												PE	R OOZEN	4 50	7.5
V-55.	NICKEL	PLATED											PE	R OOZEN	5.50	9 (
V-56.	BRASS												PE	R OOZEN	5 00	9.0
V-56.	NICKEL	PLATED											PE	R OOZEN	6.00	10.

### WASH-TRAY PLUGS WITH RUBBER STOPPERS. -V-57.

SIZE	INCHES	1	11	1½	2
V-57. BRASS V-57. NICKEL PLATED	PER OOZEN PER DOZEN	8.00 9.00	9.00 10.50	13.50 15.00	20.00 22.50



V-64, BATH OR SINK PLUG.



V-65. WASH-TRAY PLUG.



V-70. RUBBER STOPPER.

### BATH, SINK, AND WASH-TRAY PLUGS WITH RUBBER STOPPERS.-V-64 and V-65.

SIZE	INCHES	1	11	11	2
V-64. BRASS	PER OOZEN PER DOZEN PER DOZEN PER OOZEN	2.00	2 25	3.50	5.00
V-64. NICKEL PLATED		2.50	2.75	4.00	6.00
V-65. BRASS		2.50	3.25	4.00	6.00
V-65. NICKEL PLATED		3.50	4.25	5.00	7.50

### RUBBER STOPPERS. V-70.

SIZE	INCHES	Ĩ.	1	14	1‡	1 ½	2
V-70	ER OOZEN	1.00	1.00	1.00	1.25	1.75	2.50

# PLUGS WITH METAL STOPPERS.



COMMON OVERFLOW.



V-81. PATENT OVERFLOW.



V-82. PLUG FOR IRON BASIN.



V-84. BASIN GRATE.

# BASIN PLUGS WITH IRON STOPPERS AND BASIN GRATES.

FIGURE	V-80	V-81	V-82	V-84
POLISHED BRASS PER DOZEN NICKEL PLATED PER 00ZEN	8.00 8.50	9.00 9.50	20.00 22.00	12.00



V-86. SLATE OR SOAPSTONE SINK PLUG.



V-88. BATH PLUG, IRON PIPE,



V-94. BATH OR SINK PLUG.



V-96. WASH TRAY PLUG.

### SINK OR BATH PLUGS WITH METAL STOPPERS.-V-86 and V-88.

SIZE	1	1 1	1 ½	2
V-86. POLISHED BRASS         PER 00ZEN           V-86. NICKEL PLATED         PER D0ZEN           V-88. POLISHED BRASS         PER 00ZEN           V-88. NICKEL PLATED         PER 00ZEN	15.00	16.00	26.00	40.00
	17.00	19.00	29.00	44.00
	15.00	18.00	24.00	32.00
	16.00	20.00	26.00	34.00

### BATH AND WASH TRAY PLUGS WITH METAL STOPPERS.-V-94 and V-96.

SIZE .		INCHES	34	1	14	1 ½	2	$2\frac{1}{2}$	8	4
V-94. V-96.	POLISHED BRASS	PER OOZEN PER DOZEN PER ODZEN PER DOZEN	2.00 2.50	2.50 3.00	3.00 3.50 6.00 7.50	4.00 4.50 7.00 8.75	7.00 8.00 10.00 13.00	15.00 17.00 17.00 20.00	18.00 21.00 22.00 25.00	36.00 40.00 44.00 50.00





V-101. "GOOD" STOPPER.





V-110. SINK GRATE.

V-100. "GOOD" P. O. BASIN PLUG.

V-103. GASKET.

# "GOOD" BASIN PLUGS, STOPPERS AND GASKETS.

FIGURE	V-100	V-101, Basin	V-101, Bath	V-103
PER DOZEN	6.75	4.20	6.00	.60

### GRATES FOR EARTHEN SINKS.-V-110.

STYLE	Kitchen Sink	Slop Sink
POLISHED BRASS PER DOZEN NICKEL PLATED PER DOZEN	48.00 51.00	50.00 53.00







V-115. SAFE WASTE,

V-116. SAFE WASTE, IRON PIPE.

V-117. RAISED STRAINER, V-120. SAFE WASTE VALVE FOR URINAL TROUGH.

### SAFE WASTE GRATES AND RAISED STRAINERS.-V-115, V-116, and V-117.

FIGURE	 		 	V-115	V-116	V-117
NICKEL PLATED	 	,	 EACH	1.25	.75	4.50

### BRASS SAFE WASTE VALVES .- V-120.

SIZE INCHES	3	1	14	11/2	2
FINISHED EACH	.75	1.00	1.25	1.75	2.25







V-134. BELL TRAP WITH STRAINER.

### DRIP CUP AND COUPLINGS, FOR MARBLE DRINKING SLABS .- V-130.

POLISHED BRASS EACH NICKEL PLATED EACH	

### BRASS BELL TRAP WITH STRAINER, FOR URINAL STALL BASE.-V-134.

ROUGH, FINISHED FLANGE AND STRAINER													2.75	
ROUGH, NICKEL PLATED FLANGE AND STRAINER		 -		-		-	 -	-	 -	-	. EAC	Н	3.00	ı



V-136. WITH FLANGE.



V-137. WITH TRAP SCREW.



V-138. FOR IRON PIPE.



V-150. CONVEX STRAINER.



V-152. FANCY

### RAISED STRAINERS.-V-136.

DIAMETER OF FLANGE INCHES	2	3	31	4
V-136.         FINISHED         PER DOZEN           V-136.         NICKEL PLATED         PER DDZEN	8.00	12.00	18.00	24.00
	10.00	15.00	22.00	30.00

### RAISED STRAINERS. V-137 and V-138.

SIZE INCHES	2	2½	3	4
V-137. FINISHED         PER DOZEN           V-137. NICKEL PLATED         PER 00ZEN           V-138. FINISHED         PER DDZEN           V-138. NICKEL PLATED         PER DDZEN	15.00	21.00	30.00	48.00
	17.00	24.00	34.00	54.00
	13.00	18.00	26.00	44.00
	15.00	21.00	30.00	50.00

### CONVEX AND FANCY STRAINERS.-V-150 and V-152.

SIZE INCHES	3	1	14	1 ½	2	21/2	3	4	5	6
FANCY, FINISHED PER DOZEN CONVEX, FINISHED PER OOZEN	.60 .95	.85 1.40	1.20 1.80	1.45 2.40	1.80 3.00	2.40 3.60	3.00 4.20	4.80 6.00	9.00 12.00	







V-202. FEMALE.



V-204. BENT, MALE.



V-206. BENT, FEMAL

SOLDERING NIPPLES.-V-200, V-202, V-204, and V-206.

SIZE INCHES	ŧ	* 3.	1/2	3	1	1‡	1 ½	2	2 ½	3
V-200, V-202 PER DOZEN V-204, V-206 PER DDZEN										



V-208. UNION, STRAIGHT.



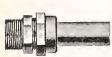
V-210. UNION, BENT.



V-212. PLAIN COUPLING.

### SOLDERING UNIONS AND PLAIN COUPLINGS.-V-208, V-210, and V-212.

SIZE INCHES	1	å	1/2	5 8	3	1	11/4	1 ½	2
V-208         PER DOZEN           V-210         PER DOZEN           V-212         PER DOZEN		2.75 3.75 4.50	4.75			9.00		17.00	



V-214. STRAIGHT COUPLING.



V-216. BENT COUPLING.



V-218. STRAIGHT COUPLING, IRON PIPE.



V-220. BENT COUPLING, IRON PIPE.

### BOILER COUPLINGS .- V-214, V-216, V-218, and V-220.

SIZE	CHES 1	§ 1
V-214. PLAIN FACE	00ZEN 7.50	8.00 11.00
V-214. GROUND FACE PER C		9.00 12.50
V-216. PLAIN FACE		9.00 12.00
V-216. GROUND FACE	DZEN 9.50 ]	10.00 13.50
PLAIN (THREE BENT, ONE STRAIGHT) PE	R SET	2.50
GROUND (THREE BENT, ONE STRAIGHT) PE	R SET	2.75
V-218, PLAIN FACE	DOZEN	0.00 14.00
V-218. GROUND FACE	DDZEN 1	11.00 15.50
V-220. PLAIN FACE		1.00 15.00
V-220. GROUND FACE	00ZEN ]	12.00 16.50







V-226. WATER-BACK COUPLING



V-228. WATER-BACK COUPLING, LONG SPUD.

### WATER-BACK COUPLINGS .- V-224, V-226, and V-228.

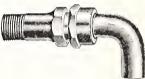
		1/2	3	1
V-224. PLAIN FACE V-224. GROUND FACE V-226. PLAIN FACE V-226. GROUND FACE	PER DOZEN PER DOZEN PER DOZEN PER DOZEN PER DOZEN	6.50 7.50 7.50 8.50	7.00 8.00 9.00 10.00 10.00	10.00 11.50 13.00 14.50



V-230. BENT COUPLING.



V-232. BENT COUPLING, IRON PIPE. V-234. BENT COUPLING, LONG SPUD.



# WATER-BACK COUPLINGS .- V-230, V-232, and V-234.

SIZE .		INCHES	1/2	3	1
			7.50 8.50	8.00 9.00	11.00 12.50
V-232.	PLAIN FACE .		8.50	10.00	14.00
		PER DOZEN PER DOZEN	9.50	11.00 11.00	15.50



V-260. TRAP SCREW.



V-262. TRAP SCREW, WITH SOCKET.



V-264. TRAP SCREW, WITH PRO-JECTING FLANGE.

### TRAP SCREWS.-V-260, V-262, and V-264.

SIZE	INCHES	î	3 4	1	1 ‡	1 ½	2	$2\frac{1}{2}$	3	31	4	5	6
V-260.	FINISHED PER DOZEN	1.80	2.25	2.50	3.00	4.00	7.00	10.00	15.00	18.00	20.00	27.50	42.50
	NICKEL PLATED . PER DOZEN												
V-262.	FINISHED PER DOZEN	'					7.00	10.00	15.00	18.00	20.00		
V-262.	NICKEL PLATED . PER DOZEN			'			11.00	15.00	20.00	23.50	26.00		!
V-264.	FINISHED PER DOZEN						11.00	14.50	20.00	23.50	26.00	35.50	
V-264.	NICKEL PLATED . PER DOZEN						15.50	19.50	26.00	30.50	35.00	47.50	



V-266. TRAP SCREW WITH STRAIGHT COUPLING.



V-268. TRAP SCREW WITH BENT COUPLING.

### TRAP SCREWS.-V-266.

SIZE	3	31/2	4	5
FINISHED PER OOZEN NICKEL PLATED PER OOZEN	21.00	25.00	28.00	35.50
	28.50	33.50	38.00	50.50

Add to list for Beut Coupling instead of Straight, per dozen, \$2.00.

### TRAP SCREWS WITH BENT COUPLING AND PROJECTING FLANGE .- V-268.

SIZE INCNES	3	3 1	4	5
FINISHED PER OOZEN NICKEL PLATED PER OOZEN	28.00	32.50	36.00	45.50
	36.50	42.00	48.00	61.50



V-280. BRASS FERRULE.



V-281. WITH HUB.



V-283. REDUCING FERRULE.



V-285.



V-287. BENT, WITH HUB

BRASS FERRULES.--V-280 and V-281.

SIZE INCHES	2	3	4	5	6
V-280	5.00 8.00	10.00	15.00 16.00	24.00	36.00

### BRASS FERRULES .- V-283.

SIZE	INCHES	2 x 1½ 2 x 1½
PER DOZEN		5.00 5.00

### BRASS FERRULES, BENT .- V-285 and V-287.

SIZE INCNES 2	4
PER DOZEN	00 24.00



V-290. BRASS FERRULE, WITH TRAP SCREW.



V-292. WITH STRAIGHT VENT COUPLING.



V-294. WITH BENT VENT COUPLING.

### BRASS FERRULES WITH TRAP SCREW.-V-290.

SIZE INCHES	2	3	4	5	6
PER DOZEN	10.00	18.00	24.00	48 00	69.00

### BRASS FERRULES WITH STRAIGHT VENT COUPLING .- V-292.

SIZE INCHES	2	3	4	5	6
WITH 14-INCH VENT COUPLING PER DOZEN WITH 14-INCH VENT COUPLING PER DOZEN WITH 2-INCH VENT COUPLING PER DOZEN	21.50	31.50	41.50	65.50	83.50
	25.00	35.00	45.00	69.00	87.00
	31.00	41.00	51.00	75.00	93.00

### BRASS FERRULES WITH BENT VENT COUPLING .- V-294.

SIZE	INCHES	2	3	4	5	6
WITH 114-INCH VENT COUPLING WITH 113-INCH VENT COUPLING WITH 2-INCH VENT COUPLING	PER DOZEN PER DDZEN PER DDZEN	24.50 30.00 37.00	34.50 40.00 47.00	44.50 50.00 57.00	68,50 74.00 81.00	86.50 92.00 99.00



V-298. IRON FERRULE.

# IRON FERRULES WITH BRASS TRAP SCREW.-V-298.

SIZE	· · · · · · · · · · · · · INCHES	2	3	4	5	G
EACH	<u> </u>	.30	. 40	.50	. 80	1.20

# SIMPLEX PATENT ROUND-WAY STOPS.

STEAM METAL, TESTED TO 200 POUNDS PRESSURE. EVERY ONE WARRANTED.



V-400. L. H. STOP, LEAD PIPE.



V-401. L. H. STOP AND WASTE, LEAD PIPE.



V-402. T. H. STOP, LEAD PIPE.



V-403. T. H. STOP AND WASTE, LEAD PIPE.



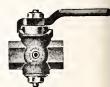
V-404. T. H. STOP, IRON PIPE.



V-405. T. H. STOP AND WASTE,



V-406. L. H. STOP,



V-407. L. H. STOP AND WASTE,

### SIMPLEX ROUND-WAY STOPS, FOR LEAD PIPE.-V-400, V-401, V-402, and V-403.

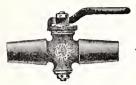
SIZE	INCHES	1/2	ę	<del>2</del>	1
PLAIN		18.00 20.00	21.50 23.50	26.50 28.50	46.00 49.00

### SIMPLEX ROUND-WAY STOPS, FOR IRON PIPE.-V-404, V-405, V-406, and V-407.

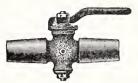
SIZE INCHES	į.	ą	à	4	11	1 ½
PLAIN PER DOZEN WITH CHECK AND WASTE PER DOZEN	20.00	24.50	29.50	50.00	77.50	110.50
	22.00	26.50	31.50	53.00	81.50	116.50

### SIMPLEX PATENT FLAT WAY STOPS.

STEAM METAL, TESTED TO 200 POUNDS PRESSURE. EVERY ONE WARRANTED.



V-418. L. H. STOP LEAD PIPE.



V-419. L. H. STOP AND WASTE LEAD PIPE.



V-420. T. H. STOP LEAD PIPE.



V-421. T. H. STOP AND WASTE LEAD PIPE.



V-422. T. H. STOP IRON PIPE.



V-423. T. H. STOP AND WASTE



V-424, L. H. STOP IRON PIPE.



V-425. L.H. STOP AND WASTE

### SIMPLEX FLAT WAY STOPS FOR LEAD PIPE.-V-418, V-419, V-420, V-421.

SIZE INCHES	1/2	5 8	3.	1
PLAIN	14.00	16.50	20.50	30.00
	16.00	18.50	22.50	33.00

### SIMPLEX FLAT WAY STOPS FOR IRON PIPE .- V-422, V-423, V-424, V-425.

SIZE INCHES	1/2	8	3	1
PLAIN . PER DOZEN WITH CHECK AND WASTE . PER DOZEN	16.00	19.50	23.50	34.00
	18.00	21.50	25.50	37.00

# ROUGH ROUNDWAY STOPS.







TEE HANDLE, L. AND I. P.

TEE HANDLE,

### TEE HANDLE ROUNDWAY STOPS.

SIZE INCHES	1/2	ĝ	3 4	1	14	1 ½	2
V-460. PLAIN PER DDZEN	17.00	20.00	25.00	44.00	20.00	100.00	180.0
V-460. WITH CHECK AND WASTE PER DDZEN	19.00	22.00	27.00	47.00	74.00	106.00	190.0
V-462. PLAIN PER DDZEN	18.00	21.50	26.50	46.00	72.50	103.50	185.0
V-462. WITH CHECK AND WASTE PER ODZEN	20.00	23.50	28.50	49.00	76.50	109.50	195.0
V-464. PLAIN PER DOZEN	19.00	23.00	28.00	48.00	75.00	107.00	190.0
V-464, WITH CHECK AND WASTE PER DOZEN	21.00	25.00	30.00	51.00	79.00	113.00	200.0



V-466. LEVER HANDLE, L.P.



V-468. LEVER HANDLE, L. AND I. P.



V-469. LEVER HANDLE, I.P.

### LEVER HANDLE ROUNDWAY STOPS.

SIZE INCHES	Ÿ	ğ	3	1	1‡	1 ½	2
V-466. PLAIN PER DOZEN	18.00	21.50	26.50	46.00	72.50	103.50	185.00
V-466. WITH CHECK AND WASTE PER DOZEN	20.00	23.50	28.50	49.00	76.50	109,50	195.00
V-468. PLAIN PER OOZEN	19.00	23.00	28.00	48.00	75.00	107.00	190.00
V-468. WITH CHECK AND WASTE PER DOZEN	21.00	25.00	30.00	51.00	79.00	113.00	200.00
V-469. PLAIN PER DOZEN	20.00	24.50	29.50	50.00	77.50	110.50	195.00
V-469. WITH CHECK AND WASTE PER OOZEN	22.00	26.50	31.50	53.00	81.50	116.50	205.00

### ROUGH ROUND-WAY STOPS.





V-480. TEE HANDLE, I. P.

V-481. LEVER HANDLE, I. P.

# TEE HANDLE, ROUND-WAY STOPS, FOR IRON PIPE.-V-480. NEWPORT PATTERN.

SIZE INCHES	1/2	\$ -	3	1
PLAIN . PER DOZEN WITH CHECK AND WASTE . PER DOZEN	12.00	17.00	18.00	30.00
	14.00	19.00	20.00	33.00

# LEVER HANDLE, ROUND-WAY STOPS, FOR IRON PIPE.-V-481. NEWPORT PATTERN.

SIZE INCHES	1/2	ş	1	1
PLAIN PER DOZEN WITH CHECK AND WASTE PER DOZEN	13.00	18.50	19.50	32.00
	15.00	20.50	21.50	35.00



V-483. FOR LEAD PIPE.



V-484. FOR LEAD AND IRON PIPE.



V-485. FOR IRON PIPE.

# TEE HANDLE, ROUND-WAY STOPS.-V-483, V-484, and V-485. MINNEAPOLIS PATTERN.

SIZE INCHES	1/2	5	3	1
FOR LEAD PIPE PER DOZEN FOR LEAD AND IRON PIPE PER DOZEN FOR IRON PIPE PER DOZEN	21.00	26.00	29.50	50.00
	22.00	27.50	31.00	• 52.00
	23.00	29.00	32.50	• 54.00

# ROUGH STOPS.



V-488. TEE HANDLE, L. P.



V-490. CHICAGO PATTERN.



V-492. TEE HANDLE, L. AND I. F

### TEE HANDLE ROUGH STOPS.

SIZE INCHES	3	1/2	\$	3	1	1 }	1 ½	2
V-488. WITH CHECK AND WASTE	11.00 13.00 12.50 12.00 14.00	13.00 15.00 14.50 14.00 16.00	15.00 17.00 16.50 16.50 18.50	19.00 21.00 20.50 20.50 22.50	28.00 31.00 30.00 30.00 33.00	46.00 50.00 48.50 52.50	64.00 70.00 67.50 73.50	110.00 120.00 115.00 125.00



V-494. TEE HANDLE, I. P.



V-496. TEE HANDLE, SCREWED IN AND OUT.



SCREWED IN AND OUT.

### ROUGH STOPS FOR IRON PIPE.

SIZE INCHES	g	10	2	34	1	11	1-1/2	2
V.494. PLAIN	14.00	17.00 15.00 17.00 16.00	20,00 18,00 20,00 19.50	22.00 24.00 22.00 24.00 23.50 25.50	35.00 32.00 35.00 34.00	51.00 55.00	77.00 71.00 77.00 74.50	130.00 120.00 130.00 125.00

### ROUGH STOPS.







V-502. FOR LEAD AND IRON PIPE.

### LEVER HANDLE ROUGH STOPS.

SIZE		INCHES	3 5	$\frac{1}{2}$	å 8	3	1	14	1 ½	2
	PLAIN	PER DDZEN PER DDZEN								
	PLAIN	PER DDZEN	13.00	15.00	18.00	22.00	32.00	51.00	71.00	120.00
	WITH CHECK AND WASTE PLAIN	PER DDZEN PER DDZEN			20.00 19.50					
	WITH CHECK AND WASTE	PER DOZEN								135.00







V-518. FOR LEAD AND IRON PIPE.

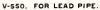
V-520. FOR IRON PIPE.

### ROUGH STOPS AND HYDRANT COCKS.

SIZE .			. INCHES	3 8	- <u>1</u>	Sign	3	1	14
V-508. V-508. V-518. V-520.	PLAIN . WITH CHECK AND WASTE		PER DDZEN PER DOZEN PER DDZEN PER DDZEN	14.00 16.00	16.00 18.00 15.00 20.00	19.50 21.50 18.50 24.00	23.50 25.50 22.50 29.50	34.00 37.00 35.00 50.00	60.00

V-508 Can be furnished in Roundway and Lever Handle Patterns.







V-551. FOR IRON PIPE.

### IMPROVED BALL COCKS .- V-550 and V-551.

SIZE INCHES	1/2	å	3	1	11/4	11/2	5
V-550						80.00 80.00	150.00 150.00



V-553. BOTTOM SUPPLY.



V-555. TOP SUPPLY.

# BALL COCKS, FOR CLOSET TANKS .- V-553 and V-555.

FIGURE	V-553	V-555
PER DOZEN	26.00	26.00



V-557. WITH LEVER.



V-558. TAPPED, FOR IRON PIPE.

# COPPER BALLS.

SIZEIN	CHES 5	6	7	8	9	10	12
V-557							



V-570. FOR LEAD PIPE.



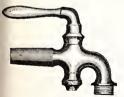
V-571. FOR IRON PIPE.



V-572. FOR IRON PIPE, WITHOUT SHOULDER.

# PLAIN BIBBS, GROUND PLUG.

SIZE .		CHES 1	8 8	1/2	5	3	1	14	$1\frac{1}{2}$	2
V-570.	FINISHED PER O		12.00							170.00
V-570.	NICKEL PLATED PER 0	OZEN   12.00	14.00	17.50	20.50	26.50	39.00			
V-571.	FINISHED PER 0	OZEN 12.00	14.00	17.00	20.00	26.00	39.00	64.00	90.00	180.00
V-571.	NICKEL PLATED PER 0	OZEN   14.00	16.00	19.50	22.50	28.50	42.00			
V-571.	ROUGH PER O	0ZEN 11.00	13.00	16.00	18.00	23.00	35.00	56.00	78.00	160.00
V-572.	FINISHED PER 0	OZEN   12.00	14.00	17.00	20.00	26.00	39.00	64.00	90.00	180.00
V-572.	NICKEL PLATED PER 0	ozen   14.00	16.00	19.50	22.50	28.50	42.00			
	ROUGH PER O		13.00	16.00	18.00	23.00	35.00	56.00	78.00	160.00



V-573. FOR LEAD PIPE.



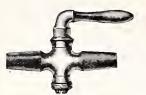
V-574. FOR IRON PIPE.



V-575. FOR IRON PIPE, WITHOUT SHOULDER.

### HOSE BIBBS, GROUND PLUG.

SIZE		INCHES	j	ş	3	1	11/4	1 ½	2
	D PER		17.00	20.00 22.50	26.00 28.50	39.00 42.00	64.00	90.00	180.00
V-574. FINISHE	D PER	R OOZEN	19.00	22.00	28.00 30.50	42.00 45.00	68.00	96.00	190.00
V-574. ROUGH		R OOZEN	18.00	20.00	25.00	38.00	60.00	84.00	170.00
V-575. NICKEL	PLATED PER	R OOZEN	21.50	24.50	28.00 30.50	42.00 45.00	68.00	96.00	190.00
V-5/5. ROUGH	PER	R OOZEN	18.00	20.00	25.00	38.00	60.00	84.00	170.00







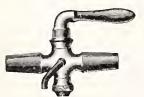
V-587, FOR IRON PIPE.

# PLAIN STOPS, LEVER HANDLE, FOR LEAD PIPE.-V-585.

SIZEINCHES	ą	į.	5	3	1
FINISHED . PER OOZEN NICKEL PLATED . PER OOZEN	15.50	17.50	20.00	26.50	39.00
	17.50	19.50	23.00	29.00	43.00

### PLAIN STOPS, LEVER HANDLE, FOR IRON PIPE.-V-587.

SIZE INCHES	28	1/2	ě	3	1
FINISHED . PER OOZEN NICKEL PLATED . PER DOZEN	17.50	19.50	23.00	29.50	43.00
	19.50	22.00	25.50	32.00	46.00



V-589. FOR LEAD PIPE.



V-590. FOR IRON PIPE.

### SHOWER COCKS, LEVER HANDLE, FOR LEAD PIPE.-V-589.

SIZE INCHES	ą	1/2	ĝ	3	1
FINISHED PER OOZEN NICKEL PLATED PER OOZEN	18.00	20.00	22.50	29.00	43.00
	20.00	22.50	25.00	31.50	46.00

### SHOWER COCKS, LEVER HANDLE, FOR IRON PIPE.-V-590.

SIZE INCHES	å	1	5 H	3	1
FINISHED . PER OOZEN NICKEL PLATED . PER OOZEN	19.50	21.50	25.00	31.50	46.00
	21.50	24.00	27.50	34.00	49.00





## COMPRESSION PLAIN BIBBS, FOR LEAD PIPE.-V-600.

SIZE INCHES	ą	1/2	- 8	3	1	11/4	1½	2
FINISHED PER DOZEN NICKEL PLATED PER DOZEN	10.00 12.00	11.00 13.00	13.00 15.00	18.00 20.50	34.00 37.00	52.00	80.00	160.00

### COMPRESSION HOSE BIBBS, FOR LEAD PIPE.~V-601.

SIZE INCHES	å	1/2	8	34	ı	11	11/2	2
FINISHED . PER DDZEN NICKEL PLATED . PER DDZEN	12.00 14.00	13.00 15.50	15.00 17.50	$\frac{20.00}{22.50}$	37.00 40.00	56.00	86.00	170.00







### HOSE BIBB, I. P.

# COMPRESSION PLAIN BIBBS, FOR IRON PIPE.-V-602.

SIZE	. INCHES	8	1/2	58	3	1	11/4	1 1/2	2
FINISHED	PER DOZEN PER DOZEN	12.00 14.00	13.00 15.50		20.00 22.50		56.00	86.00	170.00

# COMPRESSION HOSE BIBBS, FOR IRON PIPE.-V-603.

SIZE INCHES	3.8	1/2	ş	3.	1	14	$1\frac{1}{2}$	2
FINISHED PER DDZEN NICKEL PLATED PER DDZEN	14.00 16.00				40.00 43.00		92.00	180.00





V-615. PLAIN BIBB, WITH STUFFING BOX.

V-616. HOSE BIBB, WITH STUFFING BOX

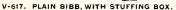
# COMPRESSION PLAIN BIBBS, WITH STUFFING BOX, FOR LEAD PIPE .- V-615.

SIZE	- J	8	3	1
FINISHED . PER DOZEN NICKEL-PLATED . PER DOZEN	13.00	15.00	21.00	38.00
	15.00	17.00	23.50	41.00

# COMPRESSION HOSE BIBBS, WITH STUFFING BOX, FOR LEAD PIPE .- V-616.

SIZE	INCHES	- j	28	3	1
FINISHED	PER OOZEN PER OOZEN	15.00 17.50	17.00 19.50	23.00 25.50	41.00 44.00







V-618. HOSE BIBB, WITH STUFFING BOX.

# COMPRESSION PLAIN BIBBS, FOR IRON PIPE, WITH STUFFING BOX .- V-617.

SIZE	INCHES	gg	1/2	B	3	J
FINISHED		14.00 16.00	. 15.00 17.50	17.00 19.50	23.00 25.50	41.00 44.00

### COMPRESSION HOSE BIBBS, FOR IRON PIPE, WITH STUFFING BOX.-V-618.

SIZE					-	 	-		-	- 1	INCHES	1/2	\$	3	1
	SHED											17.00 19.50	19.00 21.50	25.00 27.50	44.00 47.00



V-625. PLAIN BIBB, I. P.



V-626. HOSE BIBB, I. P.

# COMPRESSION PLAIN BIBBS, FOR IRON PIPE, WITHOUT SHOULDER .- V-625.

SIZE INCHES	3	į	5 8	3 4	1	1‡	1½	2
ROUGH PER DDZEN FINISHED PER DOZEN NICKEL-PLATED . PER DOZEN	11.50 12.00 14.00	12.50 13.00 15.50	14.00 15.00 17.50	19.00 20.00 22.50	33.00 37.00 40.00	48.00 56.00	74.00 86.00	150.00 170.00

### COMPRESSION HOSE BIBBS, FOR IRON PIPE, WITHOUT SHOULDER.-V-626.

SIZE INCHES	deres	1/2	58	3	1	14	11/2	2
ROUGH PER DDZEN FINISHED PER DDZEN NICKEL-PLATED . PER DOZEN	13.50 14.00 16.00	14.50 15.00 17.50	16.00 17.00 19.50	21.00 22.00 24.50	36.00 40.00 43.00	52.00 60.00	80,00 92,00	160.00 180.00



V-628. PLAIN BIBB, WITH FLANGE.



V-629. HOSE BIBB. WITH FLANGE.

### COMPRESSION BIBBS, WITH FLANGE, FOR IRON PIPE.

SIZE	1/2	5 8	3	1
V-628, FINISHED         PER DOZEN           V-628, NICKEL-PLATED         PER DOZEN           V-629, FINISHED         PER DOZEN           V-629, NICKEL-PLATED         PER DOZEN	16.00	17.50	25.00	46.00
	18.50	20.00	27.50	49.00
	18.00	19.50	27.00	49.00
	20.50	22.00	29.50	52.00

For Stuffing Box add to regular list per dozen, 2 and 8 inch, \$2.00; 2-inch, \$3.00; 1-inch, \$4.00.





V-635. PLAIN BIBB, FLANGE AND THIMBLE.

V-636. HOSE BIBB, FLANGE AND THIMBLE, I.

COMPRESSION BIBBS, FLANGE, AND THIMBLE.

SIZE INCHES	1/2	5	3	1
V-635.         FINISHED         PER DDZEN           V-635.         NICKEL PLATED         PER DDZEN           V-636.         FINISHED         PER DDZEN           V-636.         NICKEL PLATED         PER DDZEN	18.00	21.00	28.00	51.00
	21.50	24.50	32.00	55.00
	20.00	23.00	30.50	54.00
	23.50	26.50	34.50	58.00



V-638, WASH TRAY BIBB, I. P.



V-64D. WASH TRAY BIBB, L.P.

### COMPRESSION WASH TRAY BIBBS.

	COMPRESSION WASH THAT BIDE	,		
SIZE	INCHES	<u> </u>	35	34
V-638. FOR IRON PIPE		14.00	16.00	21.00
V-638. FOR LEAD PIPE		12.00 12.00	14.00 14.00	19.00 19.00
V-64D. FOR IRON PIPE	PER DDZEN	14.00	16.00	21.00

Wash Tray Bibbs can be furnished with Flange and Thimble.



V-644. PLAIN BIBB, I.P.



V-645, HOSE BIBB, I. P.

### COMPRESSION BIBBS WITH FLANGE, INSIDE THREADS.

SIZE INCH	s ½	8	3	1
V-644. FINISHED         PER DDZ           V-644. NICKEL PLATED         PER DDZ           V-645. FINISHED         PER DDZ           V-645. NICKEL PLATED         PER DDZ	N 18.50 N 18.00	17.50 20.00 19.50 22.00	25.00 27.50 27.00 29.50	46.00 49.00 49.00 52.00

For Stuffing Box add to regular list per dozen, & and &-inch, \$2.00; &-inch, \$3.00; 1-inch, \$4.00,



V-652. PLAIN STOP.



V-653. PLAIN STOP, WITH STUFFING BOX.

### COMPRESSION STOPS.

SIZE	3	1 2	5,8	3	1
V-652. FINISHED         PER DOZEN           V-652. NICKEL PLATED         PER OOZEN           V-653. ADD TO ABOVE LIST         PER DOZEN	11.00	12.00	14.00	22.00	36,00
	13.00	14.50	16.50	24.50	39,00
	2.00	2.00	2.00	3.00,	4,00



-655. FOR LEAD AND IRON PIPE.



V-657, FOR IRON PIPE.



V-659. FOR IRON PIPE, WITH STUFFING BOX.

### COMPRESSION STOPS FOR LEAD AND IRON PIPE.-V-655.

SIZE INCHES	3	<u>j</u>	â	3 4	1
FINISHED . PER OOZEN NICKEL PLATED PER OOZEN	12.00	13.00	15.00	23.00	38.00
	14.00	15.50	17.50	25.50	41.00

### COMPRESSION STOPS FOR IRON PIPE,-V-657.

SIZE INCHES	ğ	1/2	Ę	3 4	1
FINISHED	13.00	14.00	16.00	24.00	40.00
	15.00	16.50	18.50	26.50	43.00

### COMPRESSION STOPS FOR IRON PIPE, WITH STUFFING BOX.-V-659.

SIZE INCHES	ate	1/2	572	3 4	1
FINISHED	15.00	16.00	18.00	27.00	44.00
	17.00	18.50	20.50	29.50	47.00





V-665. FOR LEAD PIPE.

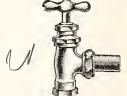
V-667. FOR IRON PIPE.

# COMPRESSION SHOWER COCKS WITH STUFFING BOX.

SIZE INCNES	1/2	5	3	1
V-665. FINISHED         PER DOZEN           V-665. NICKEL PLATEO         PER DOZEN           V-667. FINISHED         PER DOZEN           V-667. NICKEL PLATED         PER DOZEN	16.50	19.50	27.00	44.00
	19.00	22.00	29.50	47.00
	18.50	21.50	29.00	48.00
	21.00	24.00	31.50	51.00



V-670. FOR IRON PIPE.

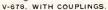


V-674. WITH COUPLING.

# COMPRESSION ANGLE COCKS WITH STUFFING BOX.

	· · · · · · · · · · · · · · · · · · ·				
SIZE		. EACN	ફ	ŷ.	3
V-670 FINISHED V-670 NICKEL PLATED V-674. FINISHED V-674. NICKEL PLATED		000 007511	15.00 17.50 20.00 23.00	16.00 18.50 21.00 24.00	27.00 29.50 35.00 38.50





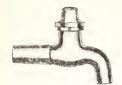


V-682. WITH LOOSE KEY.

# COMPRESSION UNION AND ANGLE STOPS.

SIZE	INCHES	ĝ,	1/2	3 2	3	1
V-678, FINISHED V-678, NICKEL PLATED V-682, FINISHED V-682, NICKEL PLATED	PER OOZEN PER OOZEN PER OOZEN PER OOZEN	21.00 23.50	24.00 27.00 22.00 24.50	30,00	43.50 47.00 34.00 36.50	60.00

V-682 can be furnished with coupling at special price.





V-694, PLAIN BIBB FOR LEAD PIPE, LOOSE KEY.

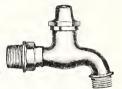
V-695. HOSE BIBB FOR LEAD PIPE, LOOSE KEY.

### COMPRESSION BIBBS WITH LOOSE KEY, FOR LEAD PIPE.

SIZE	INCHES	1 2	8	. 3	1
V-694. FINISHED V-694. NICKEL PLATED V-695. FINISHED V-695. NICKEL PLATED	PER DDZEN PER DDZEN PER DOZEN PER DOZEN PER DOZEN	17.00 $19.50$ $19.00$ $21.50$	19.00 21.50 21.00 23.50	25.00 27.50 27.00 29.50	42.00 45.00 45.00 48.00



V-696. FOR IRON PIPE, LOOSE KEY.



V-697. FOR IRON PIPE, LOOSE KEY.

### COMPRESSION BIBBS WITH LOOSE KEY, FOR IRON PIPE.

				2	
SIZE	INCRES	3	i i	4	1
V-696. FINISHED	PER DDZEN	19.00	21,00	27.00	45.00
V-696. NICKEL PLATED	. PER DOZEN	21.50	23.50	29.50	48.00
V-697. FINISHED	- PER DDZEN	21.00	23.00	29.00	48.00
V-697. NICKEL PLATED	PER DDZEN	23.50	25.50	31.50	51.00



V-698. LOOSE KEY, FOR LEAD PIPE.



V-699. LOOSE KEY, FOR IRON PIPE.

### COMPRESSION STOPS WITH LOOSE KEY.

SIZE	INCHES	Ŧ	5	3	1
V-698, FINISHED	. PER DOZEN	18.00 20.50	20.00 22.50	28.00 30.50	44.00 47.00
V-699. FINISHED V-699. NICKEL PLATED	. PER DDZEN . PER DDZEN	20.00 22.50	22.00 24.50	31.00 33.50	48.00 51.00

For Stuffing Boxes add to regular list, per dozen, \(\frac{1}{2}\) and \(\frac{3}{2}\) inch, \(\frac{8}{2}\).00; \(\frac{3}{2}\) inch, \(\frac{8}{3}\).00; \(1\) inch, \(\frac{8}{4}\).00.

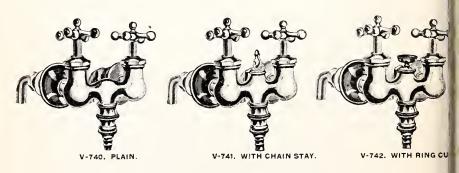






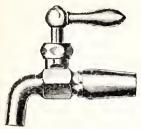
COMPRESSION BASIN AND PANTRY COCKS.

7 11			
V-720, NICKEL PLAT	ED		PER DOZEN 19.00
V-721, NICKEL PLAT	ED		PER DOZEN 22.00
V-721, NICKEL PLAT	ED, WITH STUFFING	BOX	PER DOZEN 24.00
V-730, NICKEL PLAT	TED		PER DDZEN 34.00



### COMPRESSION DOUBLE BATH COCKS.

	FIGURE	V-740	V-741	V-742
١	NICKEL PLATED	7,00	8.00	8.00



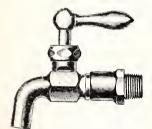


V-76D. PLAIN BIBB, L. P.

SIZE		1	1/2	5.8	3 4	1
FINISHED	 	PER DDZEN	18.00 22.00	20.00 24.00	26.00 32.00	36.00 46.00

# FULLER HOSE BIBBS, FOR LEAD PIPE.-V-761.

SIZE	1/2	ğ	3 4	1
FINISHED . PER DOZEN NICKEL-PLATED . PER DOZEN	$\frac{21.00}{25.00}$	24.00 28.00	30.00 36.00	· 40.00 50.00





V-762. PLAIN BIBB, I. P.

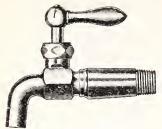
. V-763. HOSE BIBB, I. P.

# FULLER PLAIN BIBBS, FOR IRON PIPE.-V-762.

SIZE	 INCHES	1 5	3	1
FINISHED	 PER DDZEN	$\begin{array}{c cccc} 21.00 & 24.00 \\ 25.00 & 28.00 \end{array}$	30,00 36.00	40.00 50.00

# FULLER HOSE BIBBS, FOR IRON PIPE .- V-763.

SIZE INCHES	1/2	.5	34	1
FINISHED PER DDZEN NIGKEL-PLATED PER DDZEN	24.00	28.00	34.00	44.00
	28.00	32.00	40.00	54.00







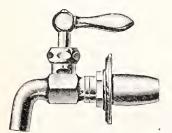
V-769. HOSE BIBB, I. P.

### FULLER PLAIN BIBBS, FOR IRON PIPE, WITHOUT SHOULDER.- V-768.

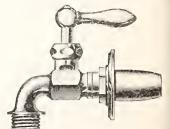
SIZE	1/2	2	3	1
FINISHED . PER DDZEN NICKEL-PLATED PER DDZEN	21.00	24.60	30.00	40.00
	. 25.00	28.00	36.00	50.00

# FULLER HOSE BIBBS, FOR IRON PIPE, WITHOUT SHOULDER. - V-769.

SIZE INCHES	1/2	54	3	1
FINISHED . PER DOZEN NICKEL-PLATED . PER DOZEN	24.00 28.00	28.00 32.00	34.00 40.00	44.00 54.00



V-772. PLAIN BIBB.



V-773. HOSE BIBB.

### FULLER PLAIN BIBBS, FLANGE, AND THIMBLE .- V-772.

SIZE	g	1/2	8	3	1
FINISHED PER DOZEN NICKEL-PLATED		26,00 32,00	28,00 34,00	36.00 42.00	48.00 58.00

### FULLER HOSE BIBBS, FLANGE, AND THIMBLE .- V-773.

SIZE INCHES	3	1/2	St	3	1
FINISHED PER DOZEN NICKEL-PLATED		29.00 35.00	32.00 38.00	40.00 46.00	52.00 62.00



V-780. PLAIN BIBB I. P



V-781. HOSE BIBB I. P.

# FULLER BIBBS WITH SOLID FLANGE, FOR IRON PIPE.

SIZE	INCHES	1/2	\$	3 4	1
V-78D, NICKEL PLATED V-781, FINISHED	PER DDZEN PER DOZEN PER DOZEN PER DOZEN PER DDZEN	23.50 29.50 26.50 32.50	25.50 31.50 29.50 35.50	33.00 39.00 37.00 43.00	44.00 54.00 48.00 58.00



V-786. PLAIN BIBB I. P.



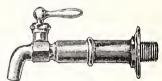
V-787. HOSE BIBB I. P.

### FULLER BIBBS WITH SOLID FLANGE, INSIDE THREADS.

SIZE	INCHES	1/2	5 B	34	1
	PER DOZEN PER DDZEN PER DDZEN PER DDZEN PER DDZEN	23.50 29.50 26.50 32.50	25.50 31.50 29.50 35.50	33.00 39.00 37.00 43.00	44.00 54.00 48.00 58.00



V-792. PLAIN BIBB I. P.



V-796, PLAIN BIBB I. P.

### FULLER BIBBS WITH FLANGE AND EXTRA LONG SHANK.

SIZE	1/2	\$ 2	3	1
V-792.         FINISHED         PER DDZEN           V-792.         NICKEL PLATED         PER DDZEN           V-796.         FINISHED         PER DDZEN           V-796.         NICKEL PLATED         PER DDZEN	33.00 39.00 40.00 44.00	36.00 42.00 47.50 51.50	46.00 52.00 61.00 67.00	60.00

V-796 Shank is 4 inches longer than standard.



V-808. PLAIN BIBB, WITH FLANGE, I. P.



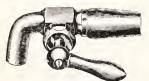
V-809. HOSE BIBB, WITH FLANGE, I. P.

# FULLER PLAIN BIBBS, WITH FLANGE, FOR IRON PIPE .- V-808.

SIZE INCHES	1	3	1	ì
FINISHED PER DOZEN NICKEL-PLATED PER DOZEN	29.00	32.00	40.00	52.00
	35.00	38.00	46.00	62.00

### FULLER HOSE BIBBS, WITH FLANGE, FOR IRON PIPE .- V-809.

SIZE	 	 . INCHES	- 1	ĝ	3	1
FINISHED		ER DOZEN ER DOZEN	32.00 38.00	36.00 42.00	44.00 50.00	56.00 66.00



V-814. WASH TRAY BIBB, L. P.



V-815. WASH TRAY BIBB, I. P.

### FULLER WASH TRAY BIBBS,-V-814.

SIZE	 INCHI	1	ğ	34	1
	PER DOZI		22.50 26.50	30.00 36.00	40.00 50.00

# FULLER WASH TRAY BIBBS, FOR IRON PIPE.-V-815. WITHOUT SHOULDER.

9	SIZE	INCHES	į.	Sign	3	1
	FINISHED	PER DOZEN	23.00 27.00	26.50 30.50	34.00 40.00	44.00 54.00





V-818. WASH TRAY BIBB.

### FULLER WASH TRAY BIBBS WITH ADJUSTABLE FLANGE.

SIZE	INCHES	<u> </u>	ŧ.	3	1
V-818. FINISHED	PER DDZEN	26.00	28 00	36.00	50.00
V-818. NICKEL PLATED		32.00	34 00	42.00	60.00
V-819. FINISHED		29.00	32.00	40.00	54.00
V-819. NICKEL PLATED		35.00	38.00	46.00	64.00

V-819. If with extra long shank, add to list, per dozen, \(\frac{1}{2}\) and \(\frac{5}{3}\) inch, \(\frac{5}{4}\).00; \(\frac{3}{4}\) and 1 inch, \(\frac{5}{6}\).00.



V-820, OUTSIDE THREAD.



V-821, INSIDE THREAD.

### FULLER WASH TRAY BIBBS WITH FLANGE AND OUTSIDE THREAD.-V-820.

SIZE	. INCHES	į.	é	3	1
FINISHED	PER DOZEN	23 50	25 50	33 00	46.00
	. PER DOZEN	29.50	31 50	39 00	56.00

### FULLER WASH TRAY BIBBS WITH FLANGE AND INSIDE THREAD,-V-821.

SIZE	1/2	à	3	1
FINISHED . PER DOZEN NICKEL PLATED . PER DOZEN	$23.50 \\ 29.50$	25.50 31.50	33.00 39.00	46.00 56.00





V-827, NUMBER 2.

# FULLER BASIN COCKS .- V-826 and V-827.

FIGURE	· · · · · · · · · · · · · · · ·	V-826	V-827
NICKEL-PLATED	PER DOZEN	40.00	44.00





V-828. NUMBER 3.

V-829. NUMBER 4.

FULLER BASIN COCKS .- V-828 and V-829.

	FIGURE	V-828	V-829
1	NICKEL-PLATED	54.00	64.00





V-830. NUMBER 6.

### FULLER BASIN COCKS.



V-831. NUMBER 7.



V-832, NUMBER O.

FIGURE	V-830	V-831	V-832
NICKEL PLATED PER DOZEN	60.00	66,00	40,00





V-842. NUMBER 1.



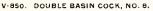
V-843. NUMBER 6.



V-846. NO. 9, DOUBLE.

1	UMBER				 -	V-842. No. 1	V-842. No. 2	V-843	V-846
E	ach			-		3.50	4.20	5.00	18.00







V-851. DOUBLE BASIN COCK, NO. 9.

### DOUBLE BASIN COCKS .- V-850 and V-851.

NUMBER	 	   8	9
NICKEL-PLATED	 	 EACH 13.00	20.00



V-852 DOUBLE SHAMPOO COCK, NO. 8.

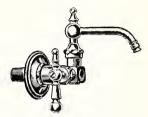


V-853. DOUBLE SHAMPOO COCK, NO. 9

### DOUBLE SHAMPOO COCKS .- V-852 and V-853.

NUMBER		 -		-	 	-	-	-		 	-		_		-	-	-	-					8	9	
NICKEL-PLATED .		 						-	-		-	-		-			-	-	-	-	_ EAG	СН	14.00	21.00	



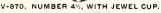


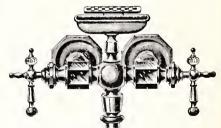
V-860. WITH SWINGING TUBE.

# FULLER BRACKET BASIN COCKS.-V-858 and V-860.

FIGURE	V-858	V-860
NICKEL PLATED	12.00	4.00



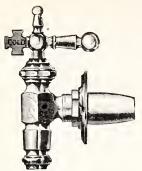


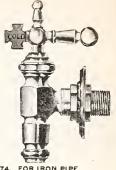


V-871. NUMBER 5, WITH SOAP CUP, REMOVABLE TRAY.

### FULLER COMBINATION BATH COCKS.-V-870 and V-871.

FIGURE	V-870	V-871
NICKEL PLATED	12.00	16.50





V-873. FOR LEAD PIPE.

V-874. FOR IRON PIPE. FULLER UPRIGHT BATH BIBBS, FLANGE, AND THIMBLE.-V-873.

SIZE	INCHES	1/2	\$ 3	1
	PER DOZEN	25.00 31.00	28.00 34.00 34.00 40.00	48.00 56.00

# FULLER UPRIGHT EATH BIBBS, WITH FLANGE, FOR IRON PIPE.-V-874.

SIZE	1/2	. 5	3 4	1
FINISHED . PER OOZEN NICKEL-PLATED . PER DOZEN	28.00	32.00	38.00	52.00
	34.00	38.00	44.00	60.00





		WORK		INGSV-878.				
V-878.	ECCENTRIC.		V-879.	RUBBER BALL.	V-affo.	BALL STEM.	WITH	BALL.
	- MI			Andrew Co.		-		

SIZE	INCHES	1/2	5	. 3	1	1‡
V-879	PER OOZEN PER DOZEN PER OOZEN	.75	3.00 .75 3.00	4.00 1.00 4.00	6.00 1.25 6.00	2.00



# BROUGHTON SELF-CLOSING WORK.



V-89D BROUGHTON PLAIN BIBBS, FOR LEAD PIPE.-V-890.

SIZE INCHES	į	5	3
FINISHED         PER DOZEN           NICKEL PLATED         PER DOZEN           SILVER PLATED         PER DOZEN           SOLID SILVER-METAL         PER DOZEN	24.00	27.00	30,00
	27.00	30.00	33.00
	42.00	51.00	54.00
	50.00	60.00	65.00

BROUGHTON PLAIN BIBBS, FOR IRON PIPE.-V-891.

SIZE	INCHES	i i	충	3
FINISHED NICKEL PLATED .	PER DOZEN	28.00 31.00	31.00 34.00	34.00 37.00
SILVER PLATED SDLID SILVER-METAL	PER DOZEN . PER DOZEN	46,00 54,00	55.00 64.00	58.00 69.00





BROUGHTON PLAIN BIBBS, FLANGE AND THIMBLE .- V-892.

SIZE	INCHES	į	3	3
FINISHED NICKEL PLATED SILVER PLATED SOLID SILVER-METAL	PER DOZEN	36.00 39.00 54.00 62.00	39.00 42.00 63.00 72.00	42.00 45.00 66.00 77.00

BROUGHTON PLAIN BIBBS WITH FLANGE, FOR IRON PIPE.-V-893.

SIZE	1/2	ě	à
FINISHED         PER DOZEN           NICKEL PLATED         PER DOZEN           SILVER PLATED         PER DOZEN           SDLID SILVER-METAL         PER DOZEN	36.00	39.00	42.00
	39.00	42.00	45.00
	54.00	63.00	66.00
	62.00	72.00	77.00

# IMPROVED BROUGHTON SELF-CLOSING BASIN COCKS.

PATENTED.



The Broughton Self-Closing Work has been in use for several years. Many of the largest hotels and public buildings in the United States are equipped with it.

Made in Polished Brass, Nickel or Silver Plated, and in Solid Silver Metal.

EVERY ONE WARRANTED.



V-900, NUMBER 1.

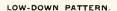
V-901. NUMBER 2.

FINISH	Polished Brass.	Nickel Plated.	Silver Plated.	Solid Silver Metal.
PER DOZEN	48 00	51 00	63 00	69 00



Upon request of many leading Architects and Plumbers we have designed the two new styles of Low-Down Self-Closing Basin Cocks illustrated in V-902 and V-903. In these Cocks are combined all the admirable features of the regular Broughton work, among which are High Grade Metal, Thorough Workmanship and Superior Finish.

Special circulars sent upon applica-





FINISH	Polished Brass.	Niekel Plated.	Silver Plated.	Solid Silver Metal.
PER DOZEN	51 00	54.00	66.00	72.00

# BOSTON SELF-CLOSING WORK.





V-909. PLAIN BIBB, L. P.

### BOSTON SELF-CLOSING PLAIN BIBBS.-V-909 and V-910.

SIZE	INCHES	3 8	1/2	XC
V-909. FINISHED . V-909. NICKEL PLATED . V-910. FINISHED		21.00 25.00 25.00 29.00	24.00 28.00 28.00 32.00	27.00 31.00 31.00 35.00



V-911. WITH FLANGE AND THIMBLE.

了

V-912. OUTSIDE THREAD.



V-913, INSIDE THREAD.

### BOSTON SELF-CLOSING PLAIN BIBBS WITH FLANGE.

SIZE	 											INCHES	1/2	<u>6</u>
V-911. FINISHED V-911. NICKEL PLATED V-912. FINISHED V-912. NICKEL PLATED V-913. FINISHED V-913. NICKEL PLATED	 		 		 							PER DOZEN PER DOZEN PER OOZEN PER ODZEN	36.00 40.00 32.00 36.00 32.00 36.00	39 00 43.00 35.00 39.00 35.00 39.00

Add for Hose Ends on above Bibbs, per dozen, \$4.00.

# SELF-CLOSING WORK.





V-922. PANTRY COCK.

### BOSTON SELF-CLOSING COCKS.-V-918 and V-922.

F			
FIGURE	 	V-918	V-922
NICKEL PLATED .	 	PER DOZEN 48.00	64.00





V-925. PLAIN BIBB, L. P.



V-926. PLAIN BIBB, I. P

# TELEGRAPH PLAIN BIBBS.

SIZEINCHES	9 8	1	ş .	2
V-925. FINISHED PER OOZEN V-925. NICKEL PLATED PER OOZEN V-926. FINISHED PER OOZEN V-926. NICKEL PLATED PER OOZEN	15.00	17.00	20.00	26.00
	17.00	19.50	22.50	28.50
	16.00	18.00	21.00	28.00
	18.00	20.50	28.50	30.50

V-924. BASIN COCK.

## TELEGRAPH BASIN COCKS .- V-924.

p		 	 		
NICKEL PLATED .	 	 	 	PER OOZEN	27.00

# DOHERTY SELF-CLOSING WORK.







V-932. PLAIN BIBB, FOR IRON PIPE.

### DOHERTY SELF-CLOSING BIBBS.-V-931 and V-932.

SIZE		1/2	5.8
V-931, NICKEL PLATED V-932, FINISHED	PER DOZEN PER ODZEN PER ODZEN PER ODZEN PER ODZEN	24.00 30.00 27.00 33.00	27.00 33.00 30.00 36.00

If with Flange and Thimble, add to list per dozen, 1-inch, \$10.00; 5-inch, \$10.50.



V-936. BASIN COCK.

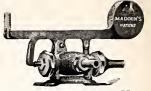


V-939. PANTRY COCK.

### DOHERTY SELF-CLOSING COCKS.-V-936 and V-939.

FIGURE	V-936	V-939
NICKEL PLATED	48.00	69.00





# CLOW IMPROVED HOPPER AND STOP AND WASTE COCKS.-V-950 and V-952.

		1	
- !	V-950. LEAD PIPE V-950. IRON PIPE V-952. LEAD PIPE	EACH	4.50
	V-950. IRON PIPE	EACH	5.00
-	V-952. LEAD PIPE	EACH	5.00
	V-952. IRON PIPE	EACH	5.50

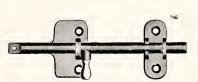


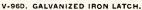
V-954. CLOW FROST-PROOF HOPPER VALVE.

# V-959. HOPPER COCK. (JOHNSON PATENT.

### FROST-PROOF VALVES AND HOPPER COCKS.~V-954 and V-959.

V-959. JOHNSON	 	 	. EACH 1.50





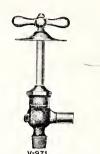
V-961. ROTARY STOP AND WASTE LATCH.

# LATCHES FOR STOP AND WASTE COCKS.-V-960 and V-961.

IRON LATCH, GALVANIZED	.75
ROTARY LATCH, JAPANNED	
RED METAL CHAIN	.08



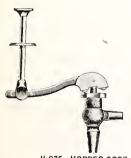
V-97D. HOPPER COCK, FOR LEAD PIPE.



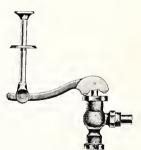
V-971. HOPPER COCK, FOR LEAD AND IRON PIPE.

### COMPRESSION HOPPER COCKS.-V-970 and V-971.

SIZE INCHES	1/2	58	3 4
V-970. ROUGH, FINISHED FLANGE AND HANDLE PER DOZEN V-970. ROUGH, MCKEL PLATED FLANGE AND HANDLE PER DOZEN V-971. ROUGH, FINISHED FLANGE AND HANDLE PER DOZEN V-971. ROUGH, NICKEL PLATED FLANGE AND HANDLE PER DOZEN	16.00	19.00	24.00
	18.50	21.50	26.50
	17.00	20.00	26.00
	19.50	22.50	28.50



V-975. HOPPER COCK, L. P.



V-976. CALIFORNIA PATTERN, I. P.

# LONG SELF-CLOSING HOPPER COCKS.-V-975 and V-976.

SIZE INCHES	1/2	5 8	3
V-975. FINISHED FLANGE AND HANDLE PER DOZEN V-975. NICKEL PLATED FLANGE AND HANDLE PER DOZEN V-976. FINISHED FLANGE AND HANDLE PER DOZEN V-976. NICKEL PLATED FLANGE AND HANDLE PER DOZEN	24.00 26.00 30.00 32.50	26.00 28.50	30.00 32.50

# CAST IRON SOIL-PIPE AND FITTINGS.



W-1. SINGLE HUB SOIL-PIPE.



W-2. DOUBLE HUB SOIL-PIPE.

### SOIL-PIPE, FIVE FOOT LENGTHS.-W-1 and W-2.

SIZE INCHES	2	3	4	5	6	8	10	12
STANDARD SINGLE HUB PER FOOT EXTRA HEAVY SINGLE HUB PER FOOT STANDARD DOUBLE HUB PER FOOT EXTRA HEAVY DOUBLE HUB PER FOOT WEIGHT STANDARD SINGLE HUB PER FOOT	24 .35 .30 41 3	.30 .55 .36 61 41	40 75 .46 .81 6½ 13	.50 1.00 .56 1.06 8½	.60 1.20 .66 1.26 10 20	1.25 2.25 1.45 2.55 18 34	2.00 3.00 2.40 3.50 25 45	3.00 4.00  30 54









QUARTER BEND.



LARGE QUARTER BENE

### QUARTER BENDS.

SIZE		INCHES	2 -	3	4	5	6	8	10	12
W-4.	STANDARD	EACH	.40	.55	.75	1.00	1.20	3.00	4 00	6.00
W-4.	EXTRA HEAVY	EACH	.50	.70	1.10	1.35	1.75	4.00	5.00	8.00
W-5.	STANDARD	EACH	. 90	1.05	1.25	1.50	1.70			
W-5.	EXTRA HEAVY*	EACH	1.00	1.20	1.60	1.85	2.25			
W-6.	STANDARD*	EACH	.90	1.05	1.25	1.50	1.70			
W-6.	EXTRA HEAVY*	EACH	1.00	1.20	1.60	1.85	2.25			
W-7.	STANDARD	EACH	.70	.85	.95	1.30	1.50			
W-7.	EXTRA HEAVY	EACH	.80	1.00	1.40	1.65	2.05			
W-B.	STANDARD	EACH	.80	1.25	1.75	3.00	4.00			
W-8.	EXTRA HEAVY	EACH	1.25	2.00	2.75	4.00	5.50			

<sup>\*</sup>Prices given are for 2 inch outlet; 3 or 4 inch ontlet can be furnished.





W-1D. LONG QUARTER BEND.



W-11. LONG QUARTER BEND, WITH HAND-HOLE, COVER, AND REST.

# LONG QUARTER BENDS.

SIZE	INCHES	2	0			c	6
51ZE	INCHES	2	3	+	3		0
LENGTH	. INCHES	14	15	18	18	18	18
W-9. STANDARD	EACH	1.10	1.25	1.50	2.25	2.50	5.50
W-9. EXTRA HEAVY	EACH	1.40	1.80	2.25	3.00	3.50	7.00
W-10. STANDARD	EACH	1.40	1.90	2.75	3.25	4.00	
W-10, EXTRA HEAVY	EACH	1.75	2.50	3.50	4.00	4.75	
W-11. STANDARD	. EACH	1.65	2.50	3.75	4.50	5.25	
W-11. EXTRA HEAVY	. EACH	2.10	3.20	4.50	5.25	6:25	













W-16.

W-17.

W-18.

W-19. EIGHTH BEND,

W-2D.

W-21.

# SIXTH, EIGHTH, AND SIXTEENTH BENDS.-W-16, W-17, W-18, W-19, W-20, and W-21.

SIZE .	INCHES	3	3	4	5	6	8	10	12
W-16.	STANDARD EACH	. 40	. 55	.75	1.00	1.20	3.00		
W-1,6,	EXTRA HEAVY EACH	. 50	.70	1.10	1.35	1.75	4.00		
W-17.	EXTRA HEAVY, 24 INCHES LONG EACH			2.25					
W-18.	STANDARD EACH	.40	, 55	.75	1.00	1.20	3.00	4.00	6.00
W-18.	EXTRA HEAVY EACH	. 50	.70	1.10	1.35	1.75	4.00	5.00	8.00
W-19.	STANDARD EACH	.70	.85	. 95	1.30	1.50			
W-19.	EXTRA HEAVY EACH	.80	1.00	1.40	1.65	2.05			
W-20.	STANDARD, 24 INCHES LONG EACH			2.50					
W-20.	EXTRA HEAVY EACH	2		3,50					
W-21,	STANDARD EACH	.40	. 55	.75	1.00	1.20	3.00		
W-21.	EXTRA HEAVY EACH	. 50	.70	1.10	1.35	1.75	4.00		









W-29. LONG T BRANCH.





### T BRANCHES.-W-27 and W-28.

SIZE INCHES	2 x 2	3 x 3 TO 3 x 2	4 x 4 TO 4 x 2	5 x 5 TO 5 x 2	6 x 6 TO 6 x 2	8 x 8 TO 8 x 2	10 x 10 TO 10 x 2	12 x 12 TO 12 x 2
W-27.         STANDARD         EACH           W-27.         EXTRA HEAVY         EACH           W-28.         FANDARD         EACH           W-28.         EXTRA HEAVY         EACH	.60 .80 1.10 1.30	.80 1.25 1.30 1.75	1.20 1.60 1.70 2.10	1.60 2.25 2.10 2.75	2.00 3.25 2.50 3.75	5.00 8.00	7.00	12.00 16.00

### LONG T BRANCHES.-W-29.

SIZE INCHES LENGTH IN THE CLEAR INCHES	4 x 4	4 x 4	4 x 4	5 x 4	5 x 4	5 x 4	6 x 4	6 x 4	6 x 4
	24	30	36	24	30	36	24	30	36
STANDARD EACH EXTRA HEAVY	2.50 3.50	3.00 4.75	3.50 5.25	3.25 4.50	4.00 5.50	4.75 6.75	4.25 5.50	$\frac{5.25}{7.25}$	6.25 9.00

### T BRANCHES, WITH HAND-HOLE AND COVER.-W-30.

SIZE INCHES	2 x 2	3 x 3	4 x 4	5 x 5	6 x 6	8 x 8
STANDARD EACH EXTRA HEAVY EACH	.75	1.00	1.25	1.75	2.25	5.00
	1.00	1.50	1.75	2.25	3.00	7.50

### T BRANCHES TAPPED FOR IRON PIPE.-W-31.

SIZE INCHES	2 x 1½	2 x 2	3 x 1½	3 x 2	4 x 1½	4 x 2	4 x 2½	4 x 3
STANDARD . EACH EXTRA HEAVY . EACH	.80	.90	1.70	1.80	1.85	1.95	2.20	2.50
	1.00	1.10	2.15	2.25	2.25	2.35	2.75	3.00







W-41. SANITARY T SRANCH WITH 2-INCH SIDE OUTLET, RIGHT OR LEFT.



W-43. SANITARY T BRANCE

### SANITARY T BRANCHES.-W-40 and W-41.

SIZE	 . INCHES	2 x 2	3 x 3 TO 3 x 2	4 x 4 TO 4 x 2	5 x 5 •To 5 x 2	6 x 6 TO 6 x 2
W-40. STANDARD	EACH	. 60	80	1.20	1.60	2.00
W-40. EXTRA HEAVY	. EACH	.80	1.25	1.60	2.25	3.25
W-41. STANDARD	EACH	1.10	1.30	1.70	2.10	2.50
W-41. EXTRA HEAVY	EACH	1.30	1.75	2.10	2.75	3.75

# LONG SANITARY T BRANCHES.-W-42.

SIZE INCHES LENGTH IN THE CLEAR INCHES	4 x 4	4 x 4	4 x 4	5 x 4	5 x 4	5 x 4	6 x 4	6 x 4	6 x 4
	24	30	36	24	30	36	24	30	36
STANDARD . EACH EXTRA HEAVY . EACH	2.50	3 00	3.50	3.25	4.00	4.75	4.25	5.25	6.25
	3.50	4.75	5.25	4.50	5.50	6.75	5.50	7.25	9.00

# SANITARY T BRANCHES TAPPED FOR IRON PIPE,-W-43.

SIZE INCHES	2 x 1 ½	2 x 2	3 x 1 ½	3 x 2	4 x 1½	4 x 2	4 x 2 ½	4 x 3
STANDARD . EACH EXTRA HEAVY . EACH	1.00	1.05	1.90	2.00	2.10	2.25	2.50	2.75
	1.20	1.25	2.35	2.45	2.50	2.65	2.90	3.15





W-52. Y BRANCH, WITH 2-INCH BIDE OUTLET, RIGHT OR LEFT.



W-53. Y BRANCH, WIT TRAP SCREW, RIGHT OR LEFT.

### LONG Y BRANCHES .- W-50.

SIZE INCHES LENGTH IN THE CLEAR . INCHES	4 x 4 24	4 \ 4 30	4 x 4 36	5 x 4 24	5 x 4 30	5 x 4 36	6 x 4 24	6 x 4 30	6 x 4 36
STANDARD EACH EXTRA HEAVY EACH	2.50 3.50	3.00 4.75	3.50 5.25	3.25 4.50	4.00 5.50	4.75 6.75	4.25 5.50	5.25 7.25	6.25 9.00

### Y BRANCHES.-W-51, W-52, and W-53.

SIZE INCH	ES 2 x 2	3 x 3	3 x 2	4 x 4 TO 4 x 2	5 x 5 TO 5 x 2	6 x 6 TO 6 x 2	8 x 8 TO 8 x 2	10 x 10 TO 10 x 2	12 x 12 TO 12 x 2
	.60 .80	.80 1.25	.80 1.25	1.20 1.60	1.60	2.00 3.25	5.00 8.00	7.00 11.00	12.00 16.00
	CH 1.10	1.30		$\frac{1.70}{2.10}$	2.10 2.75	2.50 3.75			
	CH:			3.70 4.10	4.10 4.75	4.50 5.75			







W-50.

DOUBLE Y BRANCH, WITH 2-INCH SIDE OUTLET, DOUBLE Y BRANCH, WITH TRAP SCREW, RIGHT OR LEFT.



W-57.

SIZE INCHES	2 x 2	3 x 3 TO 3 x 2	4 x 4 70 4 x 2	5 x 5 ro 5 x 2	6 x 6 5 x 2	8 x 8 TO 8 x 2	10 x 10 TO 10 x 2
W-55. STANDARD EACH W-55. EXTRA HEAVY EACH	$\frac{1.00}{1.25}$	1.25 1.60	$\frac{1.65}{2.00}$	$\frac{2.25}{3.00}$	3.00 4.00	6.00	9.00
W-56. STANDARD	:	:	2.15 2.50	2.75 3.50	3.50 4.50		
W-57, STANDARD			4.15	4.75 5.50	5 50 6.50		



W-58.



W-59.



W-60.

SIZE	2 x 2	3 x 3 το 3 x 2	4 x 4 το 4 x 2	5 x 5 ro 5 x 2	6 x 6 70 6 x 2	8 x 8 TO 8 x 2
W-58, STANDARD	.60 .80	.80 1.25	1.20	1.60 2.25	2.00 3.25	5.00 8.00
W-59. EXTRA HEAVY EACH	1.00	1.25 1.60	1.65 2.00	2.25 3 00	3.00 4.00	6.00 9.00
W-60. STANDARD EACH W-60. EXTRA HEAVY	1.00		1 50 2.00			



W-68. CROSS, TAPPED.



W-69. SANITARY CROSS, TAPPED.



W-70.



W-71. SANITARY CROSS.

SIZE INCHES	2 x 1 ½	2 x 2	3 x 1 }	3 x 2	4 x 1½	4 x 2	4 × 2 ½	4 x 3
W-68. STANDARD, TAPPED EACH W-68. EXTRA HEAVY, TAPPED EACH W-69. STANDARD, TAPPED EACH W-69. EXTRA HEAVY, TAPPED EACH	1.30	1.40	2.20 2.65 2.65 3.00	2.30 2.75 2.75 3.10	2.35 2.75 2.90 3.30	2.45 2.85 3.00 3.50	2.70 3.25	3.00
SIZE INCHES	2 x 2	3 x 3 TO 3 x 2	4 x 4 TO 4 x 2	5 x 5 TO 5 x 2	6 x 6 70 6 x 2	8 x 8 TO 8 x 2	10 x 10 TO 10 x 4	12 x 12 TO 12 x 4
W-70.         STANDARD         EACH           W-70.         EXTRA HEAVY         EACH           W-71.         STANDARD         EACH           W-71.         EXTRA HEAVY         EACH	1.00 1.25 1.00 1.25	1.25 1.60 1.25 1.60	1.65 2.00 1.65 2.00	2.25 3.00 2.25 3.00	3.00 4.00 3.00 4.00	6.00 9.00	9.00	14.00 18.00



W-80.
INCREASER AND VENT BRANCH,
WITH STRAIGHT SIDE OUTLET.



W-81.
INCREASER AND VENT BRANCH,
WITH BENT SIDE OUTLET,



W-82. INCREASER AND VENT BRANCH, TAPPED FOR IRON PIPE.



SIZE INCHES	2 x 4	2 x 4	4 x 6	4 x 6	4 x 6	2 x 4	2 x 4	4 x 6	4 x 6	4 x 6
	Standard	Standard	Standard	Standard	Standard	Ex. Heavy	Ex. Heavy	Ex. Heavy	Ex. Heavy	Ex. Heavy
SiZE OUTLET . EACH W-80 . EACH W-81 . EACH W-82 . EACH	1}  2.15	2 1.75 2.00 2.25	1½  2.75	2 2.25 2.50 2.90	3 3.00 3.50	1½  2.65	2 2.25 2.50 2.75	1½  3.50	2 3.00 3.25 3.65	3 3.75 4 25

### ROOF PLATES. -W-83.

SIZE INCHES	3	4	5	6	8	3	4	5	6	8
	Standard	Standard	Standard	Standard	Standard	Ex. Heavy	Ex Heavy	Ex Heavy	Ex. Heavy	Ex. Heavy
EACH	. 40	. 50	1.00	1.25		60		1.25	1.75	3.00





W-91. INCREASER, TAPPED FOR IRON PIPE.



W-92. SHORT INCREASER, TAPPED FOR IRON PIPE.



W-96. VENTILATING BRANCH, TO CALK OR TAPPED.



SIZE INCHES	1½ x 4	2 x 3	2 x 4	2 x 5	3 x 4	3 x 5	4 x 5	4 x 6	5 x 6	6 × 8
W-90. STANDARD . EACH W-90. EXTRA HEAVY, EACH W-91. STANDARD . EACH W-91. EXTRA HEAVY, EACH	1 40 1.75	.70 1.00	.90 1.25 1.50 1.85	1.15 1.75 1.75 2.35	.90	1.15 1.75 2.00 2.60	1.15	1.25	1.25 2.25	2.00

### SHORT INCREASERS, TAPPED FOR IRON PIPE.-W-92.

	,							
SIZE INCHES	1 ¼ x 2	1 ½ x 2	1½ x 3	1½ x 3	2 x 3	14 x 4	1½ × 4	2 x 4
EXTRA HEAVY	.85	.85	1.00	1.00	1 00	1.20	1.20	1.20

### VENTILATING BRANCHES.-W-96.

SIZE INCHES	5 / 5	3 x 2	4 x 2	4 x 3	5 x 2	5 x 4	6 × 4	8 x 4	8 x 5
TO CALK, STANDARD EACH TO CALK, EXTRA HEAVY . EACH TAPPED ON SIDE, STANDARD . EACH TAPPED ON SIDE, EXTRA HEAVY, EACH	.80 1.25 1.40 1.85	1.25 1.75 1.85 2.35	1.50 2.00 2.10 2.60	1.50 2.00	2.00 2.75 2.50 3.25	2.00 2.75	3,00	6.00 8.50	6 00 8.50

### REDUCERS.-W-99.

SIZE INCHES	3 x 2	4 x 2	5 x 2	5 x 3 5 x 4	6 x 2	6 x 3 6 x 4	8 x 3 8 x 4	8 x 5 8 x 6	10 x 6 10 x 8	12 x 6
STANDARD EACH	.45	, 65	. 75	.75	.80	. 80	2.50	2.50	3.50	5,00
EXTRA HEAVY EACH		, 75	. 90	.90	1.15	1.15	3.50	3.50	4.50	8,00









W-109. OFFSET INCREASER. TAPPED FOR IRON PIPE, WITH 6-INCH OFFSET.

W-107. OFFSET, WITH 2-INCH OUTLET.

### OFFSETS.-W-106.

SIZE INCHES	2 x 4	2 x 6	2 x 8	2 x 10	2 x 12	3 x 4	3 x 6	3 x 8	3 x 10	3 x 12
STANOARD EACH EXTRA HEAVY EACH	.50	60 1.00	70 1.10	.80 1 20	85 1 25	75 1 10	.80 1.20	. 90 1 . 35	. 95 1 . 40	1.00 1.45
SIZE INCHES	4 x 2	4×4	4 x 6	4 x 8	4 x 10	4 x 12	4 x 14	4 x 16	4 x 18	4 x 20
STANDARD . EACH EXTRA HEAVY . EACH	.80	.85 1.25	1.00 1.40	1 15 1.50	1.25 1.60	1.40 1.80	1.65 2.00	1.80 2.25	2.15 2.80	2.25 3 00
SIZE INCHES	5 \ 4	5 x 6	5 x 8	5 x 12	5 × 16	6 x 4	6 x 6	6 x 8	6 x 10	6 x 12
STANDARD EACH EXTRA HEAVY EACH	1.40 1.80	1.60	1.80 2.25	2.00 2.50	2.40 3.00	2.00 3.00	2.25 3.25	2.40 3.50	2.60 3.75	2.75 4.00

### OFFSETS WITH 2-INCH OUTLET,-W-107.

SIZE	INCHES	4 x 4	4 × 6	4 x 8	4 x 10	4 x 12	4 x 14	4 x 16	4 x 18	4 x 20
STANOARD	EACH EACH	1.35 1.75	1 50 1.90	1 65 2 00	1.75 2.10	$\frac{1}{2}.30$	2.15 2.50	2.30 2.75	2.65 3.30	2.75 3.50

### OFFSET INCREASERS.-W-108 and W-109.

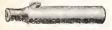
SIZE INCHES	1½ x 4	2 x 4	3 x 4	4 x 5	4 x 6	6 x 8
				3.00	3.25	4.00
W-109. EXTRA HEAVY		2 25				



### LONG INCREASERS. EXTRA HEAVY.



1½ x 4 x 24 2 x 4 x 24 2 x 4 x 48 3 x 4 x 24 4 x 5 x 30 4 x 6 x 48 5 x 6 x 30 5 x 6 x 36 SIZE INCHES W-120 . . . . . . . . . . 2.50 3.75 2.60 4.256.50 5.50 6.00 EACH 2.50 W-121 . . EACH 2 60



# LONG INCREASERS. TO CALK-TAPPED ON SIDE FOR IRON PIPE. 2 AND 3-INCH TAPPED 1%-OTHER SIZES, 2-INCH.



W-122. TO CALK, TAPPED ON SIDE.

W-123. TO CALK, TAPPED TWO SIDES.

SIZE INCHES	2 x 4 x 24	2 x 4 x 48	3 x 4 x 24	4 x 5 x 30	4 x 6 x 48	5 x 6 x 30	5 x 6 x 36
W-122. STANOARO         EACH           W-122. EXTRA HEAVY         EACH           W-123. STANDARO         EACH           W-123. EXTRA HEAVY         EACH	2.50 3.25 3.25 4.00	3.40	2.60 3.35 3.35 4.10	4.00 5.00 4.75 5.75	6.75	5.00 6.50 5.75 7.00	5.50 7.00 6.25 8.00











# VENTILATING CAPS, SHORT AND LONG.-W-130.

SIZE INCHES	2	3	4	5	6	4 x 12	4 × 24
STANDARD . EACH	,40 .50	.60 .75	.80 1.25	$\frac{1.10}{2.50}$	1.50 3.50	1.35° 2.10	3.25

SIZE INCHES	3	3	4	5	6	8	10	12
W-134. STANDARD EACH	.30	. 45	.65 .75	.75	.80 1.15	2.50 3.50	3.50 4.50	5.00 8.00
W-135. STANDARD . EACH	.30	. 45	.65	.75	.80	2.50 3.50	3.50	5.00 8.00
W-138. STANDARD EACH	.30	. 45	.65	.75	.80 1.15	2.50	3.50	5.00
W-138. EXTRA HEAVY EACH W-140. STANDARD EACH	.15	.25	. 30	. 35	.50	3.50 1.20	4.50 2.00	3.00
W-140. EXTRA HEAVY EACH	. 25	35	. 40	.50	.65	1.50	3.00	4.00







W-148. SOIL-PIPE TEST PLUG.

W-150. PIPE HOOK.



W-155. EXTENSION PIECE.

### THIMBLES, PIPE RESTS, TEST PLUGS, AND HOOKS.

SIZE	2	3	4	5	6	8	10
W-143. STANDARD     EACH       W-143. EXTRA HEAVY     EACH       W-144. STANDARD     EACH       W-144. EXTRA HEAVY     EACH       W-148. SOIL-PIPE TEST PLUGS     EACH       W-150. PIPE HOOKS     EACH	.30 .40 .15 .25 1.00	.40 .55 .25 .40 1.25	.50 .65 .30 .50 1.50	.60 .80 .35 .60 2.00	.70 1.00 .45 .75 2.50	1.10 1.75 4.50	1.75 2.50

### EXTENSION PIECES.-W-155.

SIZE AND EXTENSION INCHES	2 x 4	2 x 6	2 x 8	2 x 12	4 x 4	4 x 6	4 x 8	4 x 12
STANDARD EACH EXTRA HEAVY EACH	.30 .50	.40	.45 .70	.60 .80	.65 1.10	.75 1.20	.80 1.30	1.00 1.50

### SOIL PIPE FITTINGS.







# PLAIN TRAPS .- W-170, W-171, and W-172.

SIZE INCHES	2	3	4	5	6
STANDARD . EACH EXTRA HEAVY EACH	.80	1.25	1.75	3.00	4.00
	1.25	2.00	2.75	4.00	5.50







# TRAPS WITH BRASS TRAP SCREW .- W-176, W-177, and W-178.

SIZE INCHES	2	3	4	5	6
STANDARD EACH EXTRA HEAVY	3.30	3.75	4.25	5.50	6.50
	3.75	4.50	5.25	6.50	8.00







W-184. HALF S TRAP, WITH VENT.

# TRAPS WITH HUB VENT .- W-182, W-183, and W-184.

SIZE INCHES	2	3	4	5	6
STANDARD EACH EXTRA HEAVY EACH	1.30	1.75	2.25	3.50	4.50
	1.75	2.50	3.25	4.50	6.00

### SOIL PIPE FITTINGS.







W-189, THREE-QUARTER S TRAP, WITH VENT AND BRASS SCREW.

WITH VENT AND SRASS SCREW

### TRAPS WITH TRAP SCREW AND HUB VENT .- W-188, W-189, and W-190.

SIZE INCHES	2	3	4	5	6
STANDARD . EACH EXTRA HEAVY	3.80	4.25	4.75	6.00	7.00
	4.25	5.00	5.75	7.00	8.50







W-194. B TRAP, WITH HAND-HOLE AND COVER.

W-195. THREE-QUARTER S TRAP.

W-196. HALF S TRAP, WITH HAND-HOLE AND COVER.

# TRAPS WITH HAND-HOLE AND COVER .- W-194, W-195, and W-196.

SIZE INCHES	2	3	4	5	6
STANDARD. EACH	.80	1.25	1.75	3.00	4.00
	1.25	2.00	2.75	4.00	5.50



HUB VENT



W-201. RUNNING TRAP, WITH HAND-HOLE AND COVER



W-202, RUNNING TRAP, WITH DOUBLE HUB VENT.

# RUNNING TRAPS .- W-200, W-201, and W-202.

SIZE	INCHES	2	3	4	5	6	°s	10	12
W-200. STANDARD . W-200. EXTRA HEAVY . W-201. STANDARD . W-201. EXTRA HEAVY . W-202. STANDARD . W-202. EXTRA HEAVY .	EACH EACH EACH	.80 1.25	1.25	2.50 3.50 1.75 2.75 3.25 4.25	3.75 4.75 3.00 4.00 4.50 5.50	4.75 6.25 4.00 5.50 5.50 7.00	9.75 12.75 9.00 12.00 12.50 15.50	20.75	30.75



W-250.

Graduated Drainage Fitting, used in connection with our Iron Closets when arranged in batteries of two or more.

See Closet M-200, page 281.



Cast Iron Sanitary Trap enameled inside and asphalted outside, with Brass Clean-out Cnp, flanged to bolt to base of closet; outlet threaded for Iron Pipe.

For use beneath the floor.



Flanged Closet Base Fitting with threaded vent, outlet to calk into soil pipe. By using this fitting an absolute seal can be made between closet and outlet connec-

Especially adapted for use in connection with our Iron Siphon Jet, M-166.



### LEAD GREASE TRAP WITH STAND.

Diameter of Trap, 8 inches; height, 12 inches; diameter of clean-out, 6 inches; size of inlet and outlet, 11 inches.

Price, \$17.00







W-279. BAG TRAP.

WEIGHT	Standard. Extra Heavy.				Standard. Extra					
SIZE INCHES	11	11/2	2	3	4	11	11/2	2	3	4
W-275 EACI W-276 EACH W-277 EACH W-278 EACH	.50 .45 .40	.60 .60 .55	1.05 .95 .80	1.80 1.60 1.40		.60 .55 .50	.75 .65 .60	1.40 1.40 1.25 1.00	2.35 2.15 1.85	3.00 2.40
W-279	.60	80	1.35			.75	.90	1.85		



W-280. LONG OUTLET S TRAP.

W-282. LONG INLET S TRAP.

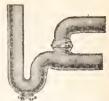
WEIGHT		Standard.	Extra Heavy.				
SIZE INCHES	1 ‡	1+	2	1}	1 }	2	
W-280 EACH W-281 EACH W-282 EACH	.90 .70 .90	1.05 .80 1.05	1.65 1.25 1.65	1.05 .80 1.05	1.20 .95 1.20	2.15 1.70 2.15	



W-290. S TRAP.



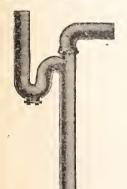
W-291. THREE-QUARTER S TRAP.



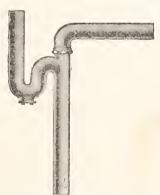
W-292, HALFS OR P TRAP.

# LEAD TRAPS, VENTED.

WEIGHT		Standard.		Extra Heavy.			
SIZE	HES 11	11	2	1 }	1 ½	2	
W-291	ACH 1.05 ACH 1.05 ACH 1.00	1.30 1.30 1.25	1.75 1.75 1.65	1.15 1.15 1.10	1.45 1.45 1.35	2.10 2.10 1.95	



W-293. LONG S TRAP.



W-294. LONG S TRAP, WITH EXTENDED VENT,



W-298. COMBINATION NIPPLE.

WEIGHT		Standard.		Extra Heavy.			
SIZE INCHES	11	$1\frac{1}{2}$	2	11	1 ½	2	
W-293 EACH W-294	1.45 1.70	1.75 2.05	2.35 2.65		1.90 2.20	2.85 3.15	

# COMBINATION SOLDERING NIPPLES.-W-298.

LENGTH	INCHES	4	6	8	10	12	14	16	18	20	24
1¼-INCH 1⅓-INCH 2-INCH 4-INCH	EACH EACH EACH EACH	.30 36 .50 1.20	.35 .40 .55 1.30	38 .45 .60 1.40	.42 .50 .65 1.50	.45 .55 .70 1.65	.50 .60 .75 1.80	.55 .65 .83 1.90	.60 .70 .88 2.05	.65 .75 .93 2.20	.75 .85 1.05 2.45



310. SHORT BEND.



W-311. SHORT BEND, EXTENDED.



W-312, 45° BEND.

### SHORT LEAD BENDS.

WEIGHT		Standard.					Ex	tra Heav	y	
SIZE INCHES	11	11/2	2	3	4	11	11/2	2	3	4
W-310 EACN	.22	.30	.45	.75	1.10	.28	.37	.60	1.00	1.45

# SHORT LEAD BENDS, EXTENDED.

WEIGHT			Standard.				y.			
SIZE INCNES	1‡	11	2	3	4	11	1½	2	3	4
EXTEN. LENGTH _ INCHES W-311 EACH EX. LONG, EXT. LENGTH. INCHES W-311 EACN	12 . 40 15 . 45	12 . 45 15 . 55	12 .70 15 .80	12 1.05 15 1.25	12 1.40 15 1.65	12 .45 15 .55	12 .55 15 .65	12 .90 15 1.10	12 1.40 15 1.65	12 1.90 15 2.15

We can furnish these Bends either 18 or 20 inches long.

W-312. 45° Lead Bends, 4 x 10 inches, \$1.10; 4 x 12 inches, \$1.40.



W-313. LONG BEND.



W-314. LONG BEND, EXTENDED.

### LONG LEAD BENDS.

	WEIGHT		Standard.					Standard. Extra Heavy.							
i	SIZE INCHES	1}	$1\frac{1}{2}$	2	3	4	11	1 1	2	3	4				
	W-313 EACH	.28	.35	. 60	.95	1.40	.35	.45	.80	1.30	1.85				

### LONG LEAD BENDS, EXTENDED.

WEIGHT			Standard				· E:	xtra Heav	y.	
SIZE INCHES	11	11/2	2	. 3	4	11	$1\frac{1}{2}$	2	3	4
EXTEN. LENGTH _ INCHES W-314 EACH	12 .45	12 .55	12 85	12 1.30	12 1.75	12 .50	12 .65	12 1.15	12 1.75	12 2.30

We can furnish these Bends 15, 18, or 20 inches long.

















DRUM TRAPS WITH BRASS TRAP SCREWS.

FIGURE	W-320	W-321	W-322	W-323	W-324	W-325	W-326	W-327
4 INCHES DIAMETER, 9 INCHES LONG . EACH	1.25	1.85	2.05	2.05	1.35	1.95	2.15	2.15
5 INCHES DIAMETER, 11 INCHES LONG . EACH	2.05	2.65	2.85	2.85	2.15	2.75	2.95	2.95
6 INCHES DIAMETER, 12 INCHES LONG . EACH	3.00	3.60	3.80	3.80	3.10	3.70	3.90	3.90

Figures W-324 to W-327 have Flange projecting beyond body of Trap. For 4-inch extra heavy Drum Traps, add 25 cents to list price.

# DRUM TRAPS WITH NICKEL PLATED TRAP SCREWS.

4 INCHES DIAMETER, 9 INCHES LONG EACH 1.55	2.30	2,60	2.60	1.65	2.40	2.70	2.70
5 INCHES DIAMETER, 11 INCHES LONG EACH 2.35	3.10	3,40	3.40	2.45	3.20	3.50	3.50
6 INCHES DIAMETER, 12 INCHES LONG EACH 3.30	4.05	4,35	4.35	3.40	4.15	4.45	4.45



W-335. COMBINATION FERRULE.



W-336. SECTIONAL LONG FERRULE.

LENGTH INCHES	4	6	8	10	12	20	24
155 X 2-INCH         EACH           2-INCH         EACH           3-INCH         EACH           4-INCH         EACH	.22 .32 .38	.43 .37 .50 .60	. 49 . 43 . 60 . 72	.56 .50 .70 .83	.61 .55 .80 .95	.80 .75 1.10 1.30	.90 .85 1.25 1.50









W-347. HALF S TRAP.

### BOWER TRAPS, LEAD BODY, WITH BRASS SCREW FOR CUP.

STYLE	s.	Half S.	Runuing.	S, with Vent.	Half S, with Vent.
SIZE INCHES GLASS CUP EACH LEAD CUP EACH BRASS CUP EACH BRASS CUP, NICKEL PLATED EACH	1.50   1.88 1.70   2.13 1.90   2.38	1.65 2.05 1.85 2.30	1.55   1.90 1.75   2.15 1.95   2.40	2.00 2.53	1.75 2.20 1.95 2.45

### EXTRA PARTS FOR BOWER TRAPS.

PART	Glass Cup.	Lead Cup.	Brass Cup.	N. P. Cups.	Balls.	Gaskets.
114-INCH TRAP EACH	.10	.30	.50	.60	.10	.10





W-355, CUDELL BATH TRAP.

### McCLELLAN ANTI-SIPHON TRAP VENTS .- W-350.

SIZE	 INCHES 1 1	2
PLAIN IRON, COMPLETE, WITH MERCURY .	 2.70 5.50	4.10 8.25

# CUDELL TRAPS.-W-355.

STYLE	No Vent.	Vented.
LEAD BODY, HARD METAL DOME, INLET 1¼-INCH, OUTLET 1½-INCH	1.00 .1.25 1.35	1.25 1.50 1.60



W-370. IRON SEWER TRAP.



W-375. IRON CLEAN-OUT FOR SEWER AND DRAIN PIPE.

# IRON SEWER TRAPS AND CLEAN-OUTS.

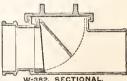
SIZE INCHES	2	3	4	5	6.	8	9	10
W-370. FOR IRON SOIL-PIPE . EACH W-370. FOR SEWER PIPE . EACH W-375. FOR STANDARD SOIL-PIPE . EACH W-375. FOR EXTRA HEAVY SOIL-PIPE . EACH	1.00	1.35 2.50	11.00 1.75 3.50	14.00 2.75 5.00	15.00 15.50 3.75 6.00	51.00 10.00	75.00	75.00 15.00



W-380. BRASS SEWER VALVE.



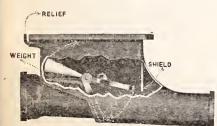
W-382. PALMER VALVE.



W-382. SECTIONAL.

SIZE INCHES	2	3	4	5	6	8	9	K
W-380 EACH W-382	6.00	1.20 6.50	1.60 7.50	2.00 9.00	2.40 10.00			

Extension pieces 24 inches long for 2-inch Trap, \$2.00; 4-inch Trap, \$3.00; 6-inch Trap, \$4.00.



MARSH BACK WATER VALVES .- W-385.

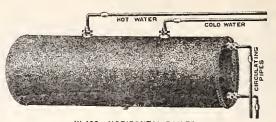
SIZE , INCHES	4	6	8	9
FOR SOIL-PIPE . EACH THREADED ENDS . EACH	11.00	16.00	22.00	28.00
	15.00	21.00	28.00	35.00

W-385. MARSH BACK WATER VALVE.

# RANGE BOILERS.



W-400, STANDARD RANGE BOILER.



W-402. HORIZONTAL BOILER.



W-404. HORIZONTAL BOILER WITH COIL, BOTTOM CONNECTIONS.



W-406. STANDARD BOILER WITH COIL.

### STANDARD RANGE BOILERS .- W-400.

CAPACITY GALLONS	18	21	24	27	28	30	32	35	36	40	42	47	48
OIAMETER INCHES HEIGHT FEET EACH AVERAGE WEIGHT POUNDS	12 3 14.50 47	12 3½ 15.50 49	14 3 19.00 57	$\begin{array}{c} 12 \\ 4\frac{1}{2} \\ 18 & 50 \\ 66 \end{array}$	$\begin{array}{c} 14 \\ 3\frac{1}{2} \\ 20.25 \\ 66 \end{array}$	12 5 19 00 72	14 4 21.00 72	13 5 21 00 76	$\begin{array}{c} 14 \\ 4\frac{1}{2} \\ 21.50 \\ 112 \end{array}$	14 5 24 00 85	16 4 26 00 95	$\begin{array}{c} 16 \\ 4\frac{1}{2} \\ 30 00 \\ 102 \end{array}$	$\begin{array}{c} 14 \\ 6 \\ 30 \ 00 \\ 102 \end{array}$
CAPACITY GALLONS	52	53	63	<b>6</b> 6	79	82	98	100	120	120	144	168	192
OIAMETER INCHES HEIGHT FEET EACH AVERAGE WEIGHT POUNDS	16 5 31.00 119	18 4 31.50 119	16 6 38 00 146	18 5 38 00 150	18 6 44 00 171	20 5 45 50 192	20 6 61 50 210	22 5 63 50 220	22 6 74.00 265	24 5 72.50 265	24 6 103 00 332	24 7 120 00 348	24 8 - 132 .00 391

W-402 same price as W-400.

### STANDARD RANGE BOILERS WITH ONE INCH GALVANIZED IRON COIL.-W-406.

CAPACITY GALLONS	30	40	52	63	66	82	100	120	120	144	168	192
EACH	18 50	23 50	27 25	33 25	33 25	38 00	53.00	55 60	54 25	77 00	90 00	100.00

W-404 same price as W-406,

Horizontal boilers with coil, having top inlet, can be furnished at same price as W-404.



W-410 STANDARD.



EXTRA HEAVY. WORKING PRESSURE, 200 LBs.\



W-411, EXTRA HEAVY.



DOUBLE EXTRA HEAVY. WORKING PRESSURE, 250 LBs.



W-412. DOUBLE EXTRA HEAVY.

### COLD-WELD BOILERS .- W-410, W-411, and W-412.

CAPACITY	12 36 14.50		19.00	18.50		19.00		21.00	
CAPACITY GALLONS DIAMETER INCHES HEIGHT INCHES STANDARD, 200 LBS. TEST EACH EXTRA HEAVY, 250 LBS. TEST EACH DOUBLE EXTRA HEAVY, 300 LBS. TEST EACH	14 54 21.50	24.00			31.00		38.00	38.00	44.00



Horizontal Cold-Weld Boilers, same list as above-tapped as shown, or special to order.

Brazing Tanks tested 200 lbs.; working pressure, 150 lbs.



W-414. BRAZING TANK.

### BRAZING TANKS .- W-414.

	12 x 20	12 x 24	12 x 30
PRICE, GALVANIZED	8.00	8.50	10.00

Owing to variation in the location and size of the openings required in Brazing Tanks, we make them to order only.



### WILHELMI BOILER.

The 250 lb. test Boiler is guaranteed to stand a working pressure of 150 lbs. and against collapse.

The 150 lb, test Boiler is guaranteed to stand a working pressure of 100 lbs, and against collapse.

# THE "MODERN" BOILER.

Guaranteed to a working pressure of 100 lbs. and against collapse; tested to 200 lbs.

Note—Our Guarantee does not hold good where a check valve is used on supply pipe.

All couplings will be furnished for lead pipe unless otherwise ordered.



THE "MODERN" COPPER BOILER.

WILHELMI COPPER BOILER. THE "MODER
WILHELMI PATENT SAFETY COPPER BOILERS -W.420

WILHELMI	PATENT	SAFE	TY CO	PPER	BOIL	ERS.~	W-42	0.			
CAPACITY GALLO	ins 30	35	40	50	60	80	100	120	125	150	200
PRICE, 150 LB. TEST	CH 30.00	35,00	40.00 34.00	50.00 44.00	60.00 55.00	80.00 72.00	92.00				

### THE "MODERN" COPPER BOILER -W-422

THE MODERN COPPER BOILER							₩-422.						
CAPACITY	GALLONS	30	35	40	50	60	80	100	120	125	150	200	
DIAMETER	INCHES . EACH	12 30.00	13 35.00	14 10.00	16 50.00	18 60.00	20 80.00	22 100.00	24 130.00	24 140.00	24 170.00	26 220. <b>0</b> 0	



W-425. BOILER STAND.



W-427. WROUGHT IRON HANGER FOR HORIZONTAL BOILER. BOILER STANDS.-W-425.

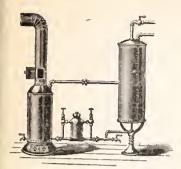


W-429. WROUGHT IRON BRACKET FOR HORIZONTAL BOILER.

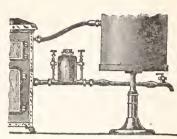
Nickel

DIAMETER OF RING INCHES	12	13	14	16	18	20	32	24
FOR BOILERS . CAPACITY, GALLONS PLAIN EACH GALVANIZED EACH	18 to 30 1.25 2.50	35 1.35 2.60	$\begin{array}{c} 40 \\ 1.40 \\ 2.70 \end{array}$	52 and 63 1.85 3.25	66 2.00 3.80	82 2.25 4.50	100 to 120 2.75 5.00	120 to 192 3.50 6.50

W-427 and W-429 are made to order for any size boiler. Stands 6 inches shorter than regular, furnished at same price. Brass Boiler Couplings, page 472. Galvanized Iron Boiler Couplings, page 63.



W-440, CONNECTED TO HEATER.



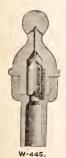
W-441. CONNECTED TO RANGE.

# DEHN'S PATENT AUTOMATIC FEED WATER-BACK, BOILER AND HEATER CLEANERS.

These Cleaners are designed to prevent the accumulation of lime, magnesia, and similar deposits in Water-Backs, Heaters and Boilers, and are being used extensively in Hotels, Restaurants, Hospitals, Barber Shops, Laundries, Residences, etc. They will successfully remove deposits already accumulated.

			•	
SIZE INCHES	3	1	11	11/2
FOR IRON PIPE . EACH FOR LEAD PIPE . EACH	12.00 12.75	15.00 16.50	17.00 18.50	19.00 20.50

Compound, per pound, 25 cents. Special Catalogue upon application.

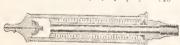


.. 443.

Champion Air Vent. Sectional view, full size. Nickel Plated, each, \$1.75

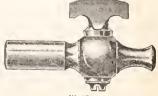


Boiler Towel Rack. Fits any Range Boiler.



W-449.

Safety Water Cushion. For preventing water hammer. Finished Brass, each, \$3.00



W-450.

.50

Air Cock for Lead Pipe. Finished Brass, each



### INSTANTANEOUS WATER HEATERS, ACME AND FLUSH.

NUMBER	4	5	8 C	14
	Acme.	Acme.	Acme,	Flush.
COPPER FINISH EACH NICKEL PLATED EACH JAPANNED IRON SHELF EACH NICKEL PLATED IRON SHELF EACH	30.00 35.00 2.00 3.50	38,00 44.00 2.00 3.50	32.00 35.00 1.50 2.50	22.00 2.00 3.50

No. 4 Heater is of medium size, for baths and domestic purposes; No. 5 Heater same as No. 4, except arranged for gasoline; No. 8 C Acme, small size, for baths, with shower attachment; No. 14 Flush, for baths only.

Special Catalogue upon application.



Y-10. MOSELY HEATER, FOR GAS.



Y-12.



Y-15. MOSELY HEATER, FOR GASOLINE

OR GAS. CIRCULATING WATER HEATER. MOSELY HEATER, FOR GASOL MOSELY IMPROVED WATER HEATERS.-Y-10 and Y-15.

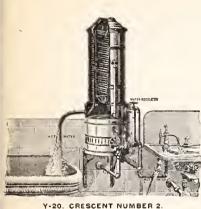
11100221 11111 110020 10111 111				
STYLE	Λ	В	С	D
EACH	14.75	18.75	21.00	23.00

Style A, Galvanized Iron Tank, Enameled; Style B, Copper Lacquered, with Enameled Top and Base; Style C, Copper Lacquered, with Bronze Top and Base, Style D, Copper, Nickel Plated, with Bronzed Top and Base.

#### MOSELY CIRCULATING WATER HEATERS .- Y-12.

Γ		
	STYLE M. POLISHED BLACK IRON JACKET, COMPLETE WITH BURNER	10.00
	STYLE O. POLISHED COPPER JACKET, OXIDIZED OR PLAIN, COMPLETE WITH BURNER	12.00
- 1	STYLE S. NICKEL PLATED COPPER JACKET, COMPLETE WITH BURNER	13.00

These Heaters can also be arranged to burn gasoline or oil.



Descriptive circular seut upon application.



Y-21, CRESCENT NUMBER 6.

#### CRESCENT INSTANTANEOUS WATER HEATERS.

NUMBER 2. NICKEL PLATED	35.00
NUMBER 6. NICKEL PLATED	25.00

Nickel Plated Shelf and Brackets for Number 2, extra, \$2.75; for No. 6, extra, \$2.00.

Nickel Plated Vcnt Fittings:-Pipe, per foot, 50 cents; Collars, 35 cents; Elbows, 80 cents; Extension Thimbles, 4 to 8 inch, \$1.00; Vent Hoods, \$1.50.



LAWLER WASH TRAY FITTINGS SHOWING CONNECTIONS.

#### LAWLER PATENT WASH TRAY FITTINGS.

SIZE INCHES	1/2	3	1
TEES, MALLEABLE IRON, GALVANIZED . EACH TEES, BRASS . EACH OFFSET ELBOWS FOR ENDS, MALLEABLE, GALVANIZED . EACH OFFSET ELBOWS FOR END9, BRASS . EACH	.20 .40 .20 .40	.30 .60 .30 .60	

By the use of the Lawler Wash Tray Fittings the hot and cold water pipe connections to a set of laundry tubs can be made with just one-half the number of fittings, one-half the number of pieces of pipe, and less than half the amount of room required by the old method. It also takes less feet of pipe, and consequently a smaller amount of time and labor.



Y-40. WATER FRONT.



Y-41. WATER FRONT.

# A COMPLETE LINE OF WATER FRONTS AND FIXTURES FOR CAST, STEEL, AND WROUGHT RANGES.

Directions for ordering Stove Repairs:

- 1. Name.
- 2. Number or letter on stove.
- 3. Maker's name.
- 4. Latest date of patent.
- 5. Wood, hard or soft coal.
- 6. Frout, pouch, or boiler feed.
- 7. Grates-flat, or duplex.
- 8. Linings-brick, or iron.
- Plates—whether right, or left, when facing hearth.

In Steel Ranges the oven-door side is the front of Range.

In ordering Water Fronts with Couplings, specify if "straight" or "bent." If not specified, the straight will be sent.





Y-SS. COPPER CLOSET PAN.

#### PATENT STEEL TOGGLE BOLTS.-Y-50.

STOCK SIZES	3 € х З	3 <sup>5</sup> 2 x 4	3 x 2½	1 <sup>3</sup> / <sub>1</sub> x 3	1 <sup>3</sup> 6 × 4	1 x 3	‡ x 4
PER DOZEN	.50	.55	. 55	.55	. 55	.80	.80

Other sizes to order. Sample sent upon application. Y-55 Copper Closet Pans, each, 65 cents.



Y-60.

#### MCCANN SEWER TRAPS .- Y-60.

SIZE		INCHES	4	6	
FOR TILE PIPE FOR IRON SOIL-PIPE		 . EACH	3.50 4.00	6.00 6.50	

Prevents the flooding of Cellars from the backing up of water through the basement or area drains,

### LIST OF STANDARD SIZES OF CAST-IRON FITTINGS.

# ADOPTED AT MEETING OF MAKERS OF CAST-IRON FITTINGS JUNE 24, 1897.

Sizes differing from Standard Sizes, if furnished, are to be charged at 5 per cent. gross discount higher than Standard Sizes.

#### STRAIGHT SIZES.

Elbows and Tees—\(\frac{1}{4}\) to 12 iuch. Elbows, 45°—\(\frac{3}{4}\) to 12 inch.  Return Bends—\(\frac{1}{4}\) to 3 inch.  Caps and Locknuts—\(\frac{2}{4}\) to 12 inch.  Y Brauches—\(\frac{1}{2}\) to 10 inch. Elbows, Right and Left—\(\frac{1}{4}\) to 3 inch.  Crosses—\(\frac{1}{2}\) to 12 inch.	Offsets—\(\frac{1}{4}\) to 6 to offset 4 inch, 6 inch and 8 inch.  Plugs—\(\frac{1}{4}\) to 12 inch.  Flange Unions—\(\frac{1}{4}\) to 12 inch.
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------

#### ELBOWS-REDUCING SIZES.

$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3 x 2½ 3 x 2 3½ x 3 4 x 3½ 4 x 3	4 x 2½ 4½ x 4 5 x 4 6 x 5 6 x 4	8 x 6
------------------------------------------------------	------------------------------------------------------	----------------------------------------------	---------------------------------------------	-------

#### REDUCING COUPLINGS.

$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	3½ x 3 3½ x 2½ 4 x 3½	4 x 2½ 4 x 2 4½ x 4	5 x 4 5 x 3	6 x 5 6 x 4 6 x 3	8 x 6 10 x 8 12 x 10
3 x 2	4 x 3	+ ½ X +		7 x 6	12 X 10

#### TEES-BULL HEAD.

	Tees with both ends of rnn the same size, with the outlet larger, thus: $1 - \frac{x^2}{1 - \frac{1}{1}}$	are known as Bull Head, and are
-		

\$ x ½ ½ x 1 ½ x 2 ½ x 2	\frac{3}{4} \times 1 \frac{1}{4} \\ \frac{3}{4} \times 1 \\ 1 \times 2 \\ 1 \times 1 \frac{1}{4} \\	$\begin{array}{c} 1\frac{1}{4} \times 2 \\ 1\frac{1}{4} \times 1\frac{1}{2} \\ 1\frac{1}{2} \times 2\frac{1}{2} \\ 1\frac{1}{2} \times 2\end{array}$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3½ x 4 4 x 6 4 x 5 5 x 6	6 x 7
3 x 1½	1 x 1 <sup>1</sup> / <sub>4</sub>	2 x 3	3 x 3½	6 x 8	

#### TEES-REDUCING ON OUTLET.

Tees which reduce on	the outlet,	thus:	2 2	are read,	2 x 1 ‡.

$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1 x 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3 x1\frac{1}{3} x1\frac{1}{3} x1\frac{1}{3} x\frac{1}{4} \\ 3 x x \frac{1}{3} \frac{1}{3} \frac{1}{3} \frac{1}{3} \\ 3 \frac{1}{3} \frac{1}{3} \frac{1}{3} \\ 3 \frac{1}{3} \frac{1}{3} \\ 4 x 3 \frac{1}{3} \\ 6 x 3 \frac{1}{3} \\ 7 x 3 \frac	4½ x 2½ 4½ x 2 5 x 4 5 x 3½ 5 x 3½	5 x 2 5 x 1½ 5 x 1½ 6 x 5 6 x 4 6 x 3½ 6 x 3 6 x 2½ 7 x 6 7 x 5 7 x 4	10 x 5 10 x 4 12 x 10 12 x 8
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# LIST OF STANDARD SIZES OF CAST-IRON FITTINGS.

#### TEES-REDUCING ON RUN.

Tees reducing on run, thus:  $2 - \frac{14}{11}$  are read,  $2 \times 1\frac{1}{2} \times 1\frac{1}{4}$ .

	7 7				
X	14 x 1/2 x 12 14 x 1/2 x 12 14 x 1/2 x 2 14 x 1 2 14 x 1/2 x 2 14 x 1 1/2 x 1 14 x 1 14 x 1 x 1 14 x	$\begin{array}{c} 2 \times 1\frac{1}{4} \times 1\frac{1}{4} \\ 2 \times 1\frac{1}{4} \times 1\frac{1}{4} \\ 2 \times 1\frac{1}{4} \times 2\frac{1}{4} \\ 2 \times 1 \times 1\frac{1}{4} \\ 2 \times 1\frac{1}{4} \times 2\frac{1}{4} \\ 2$	$\begin{array}{c} 3 \times 2\frac{1}{2} \times 1\frac{1}{4} \\ 3 \times 2\frac{1}{2} \times 1\frac{1}{4} \\ 3 \times 2\frac{1}{2} \times 1\frac{1}{3} \\ 3 \times 2\frac{1}{2} \times 3\\ 3 \times 2 \times 2\frac{1}{2} \\ 3 \times 2 \times 2\frac{1}{2} \\ 3 \times 2 \times 1\frac{1}{4} \\ 3 \times 1\frac{1}{2} \times 2\frac{1}{3} \\ 3\frac{1}{2} \times 3 \times 2\frac{1}{2} \times 3\frac{1}{3} \\ 3\frac{1}{2} \times 3 \times 2\frac{1}{2} \times 2\frac{1}{2} \times 2\frac{1}{2} \\ 3\frac{1}{2} \times 2\frac{1}{2} \times 2\frac{1}{2} \times 2\frac{1}{2} \\ 3\frac{1}{2} \times 2\frac{1}{2} \times 2\frac{1}{2} \times 2\frac{1}{2} \\ 3\frac{1}{2} \times 1\frac{1}{4} \times 3\frac{1}{4} \\ 4 \times 3\frac{1}{2} \times 3\frac{1}{2} \times 3\frac{1}{2} \end{array}$	4 x 3 x 3½ 4 x 3 x 3½ 4 x 3 x 2½ 4 x 3 x 1½ 4 x 3 x 1½ 4 x 3 x 1 4 x 3 x 1 4 x 3 x 1 4 x 3 x 1 4 x 2½ x 4 4 x 2½ x 2½ 4 x 2½ x 2½ 4 x 2½ x 1 4 x 2 x 2½ 4 x 2½ x 1 4 x 2½ x 1 4 x 2 x 3 4 x 2½ x 2 4 x 2 x 2 4 x 2 x 2 4 x 2 x 3 4 x 4 x 3 5 x 4 x 2 5 x 4 x 2	5x3 x 2½ 5x3 x 2 5x2½ x 4 5x2½ x 3 5x2½ x 3 5x2 x 5 6x5 x 6 6x3 x 6 6x3 x 6 6x2½ x 6 7x6 x 7 7x6 x 6 7x6 x 5 7x7 x 6 8x6 x 8 8x6 x 8 8x6 x 8 8x6 x 8 8x6 x 8 8x5 x 5 8x4 x 8 10x8 x 8 12x8 x 10 12x8 x 8
14 x 3 x 1	2 x 1½ x ½	3 x 2½ x 3	4 x 3½ x 3	5 x 3 x 5	
1 x 3 x 3	2 x 1 ± x 2	3 x 2½ x 2½	4 x 3½ x 2½	5 x 3 x 4	
1½ x ½ x 1½	2 x 1\frac{1}{4} x 1\frac{1}{2}	3 x 2½ x 2	4 x3 x4	5 x 3 x 3	

#### CROSSES-REDUCING SIZES.

The outlets of a Cross are always the same size, and are indicated by the last figure. Thus: A Cross a called a 2 x \frac{1}{2} Cross.

A Cross reducing on the run, thus: 1½ 1¼ is called a 1½ x 1¼ x 1 Cross.

- X	1½ x ¾ 1½ x ½ 1½ x 1¼ 1½ x 1	2 x 1\frac{1}{4} 2 x 1 2 x \frac{3}{4} 2\frac{1}{2} x 2	2½ x ¾ 3 x 2½ 3 x 2 3 x 1½	3½ x 3 3½ x 2⅓ 3½ x 2 4 x 3⅓	5 x 4 5 x 3 5 x 2 ½ 5 x 2	6 x 3 6 x 2 ½ 6 x 2 7 x 6	10 x 8 10 x 7 12 x 10 12 x 8
1 x 3 1 x ½ 14x1	1½ x ¾ 1½ x ½ 2 x 1½	$\begin{array}{c} 2\frac{7}{2} \times 1\frac{1}{2} \\ 2\frac{1}{2} \times 1\frac{1}{4} \\ 2\frac{1}{2} \times 1 \end{array}$	3 x 1	4 x 3 4 x 2 ½ 4 x 2	6 x 5 6 x 4 6 x 3 1	7 x 5 8 x 7 8 x 6	

#### BUSHINGS.

[Note. - Bushings reducing one size only, up to and including 2½ inches are malleable, and will be found, therefore, listed among the malleable fittings.]

	1 x 1 1 x 1 1 x 2	1½ x ¾ 1½ x ½ 2 x 1¼ 2 x 1 2 x 1	3 x 2½ 3 x 2 3 x 1½ 3 x 1½ 3 x 1	3½ x 1 4 x 3½ 4 x 3 4 x 2½ 4 x 2	4½ x 3 4½ x 2½ 5 x 4½ 5 x 4	6 x 4 6 x 3 ½ 6 x 3 6 x 2 ½ 6 x 2	7 x 3 7 x 2 <u>1</u> 7 x 2 8 x 7 8 x 6	9 x 6 10 x 8 10 x 6 12 x 10 12 x 8
	2 x 8 2 x 1 1 x 1 1 x 3 1 x 1	2 x 1 1	3 × 1½	4 × 3	5 × 4½	6 x 3	7 x 2	10 x 6
11	11 x 1 11 x 1 11 x 8	2½ x 1½ 2½ x 1¼ 2½ x 1	3½ x 2½ 3½ x 2 3½ x 1½	4 ×11 4 ×1 4 × 4	5 x 2 ½ 5 x 2 6 x 5	7 x 5 7 x <del>1 ½</del> 7 x 4	8 x 4 8 x 3 9 x 8	
	lix 1	2½ x 3	3½ x 1¼	4½ x 3½	6 x 4½	7 x 3½	9 x 7	

### TELEGRAPH CIPHER.

#### NUMBER OF PIECES OR FIGURE REQUIRED.

#### NUMBER OF ORDER.

#### WEIGHT OF CAST-IRON PIPE PER FOOT.

1 Mah.	34 Mend.	87 Molst.	100 Myrtle.
2 Mac.	35 Mense.	68 Mold.	150 Nah.
3 Mad.	38 Ment.	89 Mőle.	200 Nice.
4 Mag.	37 Mere.	70 Monde.	250 Nut.
5 Mall.	38 Merl.	71 Monk.	300 Ohey.
8 Maid.	39 Mesh.	72 Mont.	350 Old.
7 Main.	40 Met.	73 Mop.	400 Pad.
8 Make.	41 Mew.	74 Moral.	450 Pin.
9 Man.	42 Mice.	75 More.	500 Quad.
10 Manks.	43 Mid.	76 Morn.	550 Quote.
11 Manor.	44 Midge.	77 Morria,	800 Rapid.
12 Many.	45 Midst.	78 Morse.	850 Row.
13 Mar.	48 Might.	79 Most.	700 Sad.
14 March.	47 Mild.	80 Mot.	750 Scot.
15 Mars.	48 Mile.	81 Moth.	800 Tap.
18 Marks.	49 Milk.	82 Mould.	850 Try.
17 Marl.	50 Mince.	83 Mount,	900 Ugly.
18 Marsh,	51 Mingle.	84 Mouth.	950 Urn.
19 Mart.	52 Mind.	85 Move.	1000 Vast.
20 Mask.	53 Minor.	88 Mow.	1100 Vase.
21 Mast.	54 Mint.	87 Much.	1200 Wake.
22 Mat.	55 Mire.	88 Mud.	1300 Walk.
28 Match.	56 Mirk.	89 Muff.	1400 Ward.
24 Math.	57 Mirth.	90 Mufti.	1500 Wash.
25 Mate.	58 Miss.	91 Mulet.	1800 Watch.
20 Maul.	59 Mite.	92 Mull.	1700 Wealth.
27 May.	80 Mix.	93 Mump.	1800 Wear.
28 Maze.	81 Mizzen.	94 Mural.	1900 Yard.
29 Mead.	82 Moat.	95 Muse.	2000 Yarn.
30 Meal.	63 Moh.	98 Mush.	3000 Yoke,
31 Mean.	84 Mock.	97 Musk.	4000 Youth.
32 Meat.	85 Mode.	98 Mute.	5000 Young.
33 Melt.	86 Moil.	99 Mystic.	
		•	

#### CAST-IRON PIPE.

Size, Inches.	Tarred Water Pipe.	Untarred Gas Pipe.	Tarred Culvert Pipe.
	Arkansas		
3 .	California	- Baldwin.	
4 .	Dakota	Dover.	
8.	Delaware	. Easton.	
8 .	Florida	. Fremont.	
10 _	Georgia	- Geneva.	
12 .	Illinois	_ Hartford	- Hammond.
14 -	Indiana	. Keystone	. Kankakee.
16 .	Iowa	- Lansing	_ Lacon.
18 .	Maryland	. Marion	_ Marshall.
20 -	Michigan	Norfolk	Naples.
24 .	Montana	. Oakland	. Oakley.
30 -	Oregon	Pontiac	_ Pekin.
38 _	· · · · Virgiuia · · ·	- Rutland	Ripley.
42 -		. Seneca	Seward.
48 .	Wisconsin	- Tucson	. Topeka.
80 .	Utah	. Ulster	. Utopia.

#### NUMBER OF FEET.

100	Asla.	1500	Jersey.	8000	Russla.
200	Belgium.	2000	Kentucky.	9000	Spain.
300	Chill.	2500	Kansas.	10000	Texas.
400	Denmark.	3000	Liberia.	15000	Uruguay.
500	Egypt,	3500	Lapland.	20000	Valparaiso,
800	France.	4000	Maine.	25000	Washington.
700	Germany.	4500	Mexico.	30000	Xenia.
800	Holland.	5000	Nevada.	40000	Yorkville.
900	Ireland.	8000	Ohio.	50000	Zanesville.
1000	Japan.	7000	Peru.		

#### SIZE REQUIRED.

#### EITHER WEIGHT, DIAMETER, LENGTH, WIDTH, OR DEPTH.

16 Taylo	r. 2½	Tunis.	10 Wagner.	24 Warsaw.
1/2 Temp	le. 3	Turner.	11 Wallet.	30 Wehster.
1/4 Tiffin	. 31/2	Undine.	12 Walker.	38 Weldon.
3% Toled	lo. 4	Union.	13 Wallow.	42 Weapon.
1/2 Toron	nto. 416	Urhana.	14 Wallace.	48 Wesley.
5% Towe	r. 5	Valley.	15 Waltz.	54 Wedlock.
3 Tracy	7. 5½	Velvet.	18 Wander.	60 Welcome.
3/8 Trem	ont. 8	Venice.	17 Warble.	72 Whisper.
1 Tren	ton. 7	Vernon.	18 Walton.	84 Wicket.
11/4 Trim	hle. 8	Wabash.	19 Warrior.	96 Wisdom.
116 Trini	dad. 9	Waiter.	20 Warren.	120 Wizard.
2 Trini	ty.			

#### CAS, STEAM, AND WATER PIPE.

										-
	Size, I								Black,	Galvanized.
									Allegheny. Baltimore	Amazon.
	3%	-	 -	-				_	Camden	Bay.
	1/2					-	-	-	Detroit	Colorado
	3/4			-	-	-	-	-	Erie	Danube
	1			_	-		-	_	Fairmont	Elhe.
	11/4	-		-	-	-	-	٠.	Galena	Firth.
	11/2			-	-	-	-	-	Harrishurg	Ganges.
1	2		 -	-		-	-	_	Ithaca	Hudson.
ľ	21/2	-	 -	-	-	-		-	Jamestown	Indus.
									Kensington	
	31/6			-				-	Lancaster	Kanawha.
ľ	4			-	-	-	-	-	Macon	Lake.
	41/3	-	 -	-	-	-	-	~	Quincy	Miaml.
	5								Newark	
	8								Oneida	
	7								Paris	
	8								Reading	
	9								Salem	
	10								Troy	
	12								Utica	Ural.
,	14								Verona.	
į	18							-	Wales.	

# TELEGRAPH CIPHER.

DISCOUNT CIPHER.	DEDUCE
To be used in quoting discounts. Also not prices on Castairon Pine when	REPLIES.
specials.	Arrow Particulars go by mail.  Bayonet We are waiting for the ——. Shall we ship balance
Per Cent. Per Cent. Per Cent.	Bow We can furnish at
1 Alligator. 27 Eland. 55 Otter. 271/2 Fox. 56 Paca.	Cannon - advanced to
	Club Shall we enter order?  Dirk declined to,
25 Adder. 29 Fawn. 5714 Panther. 23 Ass. 30 Goat. 58 Porcupine.	Gun We have no order.
3 Aht. 31 Gopher, 59 Puma.	Harp None of the goods you order are in stock.  Harpoon Impossible for us to fill your order in time specified.
5 Ape. 93 Gazelle, 61 Raccoon.	Hemp We have in stock and can furnish at
6 Armadillo. 831/4 Giraffe. 62 Reindeer.	Knife Referring to your order of the, Lance We expect to ship on the
7½ Bear. 35 Hare. 63 Seal.	Lance . We expect to ship on the
8 Badger. 36 Hyena. 64 Steer. 9 Buck. 37 Horse. 65 Sbeep.	Musket . We have in stock and can ship at once
10 Bison. 37½ Hog. 66 Scorpion.	Ptstol We can ship part from stock and halance in Revolvar . Your message unintelligible; please repeat.
11 Bull. 38 Hound. 67 Squirrel. 12 Calf. 39 Hippo. 67% Snake.	mine we have none in stock,
12½ Camel. 40 Jackal. 68 Salamander.	Sabar Referring to your letter of ———,
18 Colt. 41 Jaguar. 69 Stag. 14 Cat. 42 Kaugaroo. 70 Snail.	Shell Must have nower by ———. Shield You have not answered our letter of ———.
15 Chamois. 48 Leopard. 71 Tiger.	
16 Chimpanzee. 44 Lynx. 72 Tapir. 17 Chameleon. 45 Lion. 7214 Turtle.	Spaar - We can ship to-day. Spur - We can ship to-day. Spur - We can ship on - Sword - We can ship on receipt of order.
1716 Cony. 46 Lizard. 73 Tortoise.	Sword We can ship on receipt of order.
18 Deer. 47 Lamh. 74 Viper. 19 Dromedary. 471/2 Mole. 75 Wolf	
20 Dragon. 48 Marmot. 76 Womhat.	BOUTING OF BUILDING
22 Dormouse, 50 Monse, 7714 Walrus	ROUTING OF SHIPMENTS.
28 Donkey. 51 Mastiff. 78 Worm. 24 Dog. 52 Mastodon. 79 Yak	Ash Ship via Chicago, Burlington & Quincy R. R. Bamboo Ship via Chicago, Rock Island & Pacific Ry
25 Elk. 53 Ox. 80 Zebra.	Bamboo . Ship via Chicago, Rock Island & Pacific Ry. Beach Ship via Chicago & North-Western Ry.
25 Elephant. 54 Opossum.	Birch Ship via Chicago, Milwaukee & St. Paul Ry. Boxwood Ship via Chicago & Alton R. R. Buttarnut Ship via Atchison, Topeka & Santa Fé R. R.
Per Cent.  Sable - and 2½. Unicorn. and 7½ and 5.	Buttarnut Ship via Atchison, Topeka & Santa Fé R. R.
Polecat and 214 and 5 Spanist and 717 and 10	Cedar Ship via Michigan Central R. R. Charry Ship via Lake Shore & Michigan Southern Ry.
Crocodila and it.	Charry Ship via Lake Shore & Michigan Southero Ry. Chastnut. Ship via Wisconsin Central R. R. Dogwood. Ship via Illinois Central R. R.
Gorilla and 5 and 2½. Frog and 10 and 2½.  Mule and 5 and 5. Ermina and 10 and 5.	1 EDORY Ship via Chicago Great Western Ry
Skunk and o and 7%. Buffalo and 10 and 7%.	Elm Ship via Pittshurg, Fort Wayne & Chicago Ry.
Beavar and 10 and 10 and 5.	Elm Sbip via Pittshurg, Fort Wayne & Chicago Ry. Fir Ship via Chicago & Eastern Illinols R. R. Hazel Ship via Chicago & Eric R. R. Hemlock Ship via Cleveland, Cincinnati, Chicago & St. Louis Ry.
Thax and 71/2 and 21/2. Civat and 10 and 10 and 10	Hemlock Ship via Cleveland, Cincinnati, Chicago & St. Louis Ry.
	Hickory . Ship via Chicago & Grand Trunk Ry. Holly . Ship via Great Nortbern Ry. Mabogany . Ship via Louisville, New Albany & Chicago Ry.
SHIPPING INSTRUCTIONS AND REQUESTS.	Mabogany . Ship via Louisville, New Albany & Chicago Ry.  Mapla Sbip via Louisville & Nashville R. R.
Above Ship by express. Active Ship by steamer.	Oak Ship via Northern Pacific R. R.
Adrift Ship by rail.	Pina Ship via Pittshurg, Cincinnati, Chicago & St. Louis Ry. Poplar Ship via Uuion Paeific Ry.
Abroad . Ship what you have in stock and halance as soon as possible.	Rettan . Ship via Baltimore & Ohio R. R.
Agrata Sund traces for chipment of	Radwood . Ship via Goodrich Transportation Co. Roaawood . Ship via Graham & Morton Transportation Co.
Amber . Wanted badly. When will you ship? Answer by wire.  Diamond . Ship immediately.	Spruca - Ship via Northero Michigan Transportation Co. Sycamore - Ship via Lake Mlehigan & Lake Superior Transporta-
	tion Co.
INQUIRIES.	Walnut . Ship via Western Transit Co: Yew Ship via Anchor Line.
Acorn At what price can you furnish — ?	The state of the s
Branch . How soon and at what price can you furnish?	DELIVERIES AND FREIGHT RATES.
Coln Have you iu stock and can you furnish? Collad How long will it take you to make?	
College How many —— have you in stock?	Apple F. O. B. cars Chicago. Apricot . F. O. B. cars at your city. Banana . F. O. B. cars at mill.
	Banana . F. O. B. cars at mill. Grape F. O. B. cars at mill with freight allowance, per 100
Emerald When will you sbip our order?	pounds, of
Convent: When can you ship —?  Emerald: When will you ship our order?  First. Have you shipped as any —?  Farm Have you shipped order — inst.?  Fint. When will you complete our order?  Garnas — Can you furnish us promptly ——?  Garnat — If not stread shipped caused.	Lamon The rate of freight per 100 pounds, carlots, from mill to your city, is
Flint When will you complete our order?	Orange The rate of freight per 100 pounds, less than car lots,
Granite . If not already shipped, cancel	Peach The rate of freight per 100 pounds, car lots, from
Granite If not already shipped, cancel	Chicago to your city, is  Pear The rate of freight per 100 pounds, less than car lots,
Marble . If you have not sblpped order—hold for instructions.	to your city, is

#### STEAM.

A cubic inch of water evaporated under ordinary atmospheric pressure is converted into I cubic foot of steam (approximately).

The specific gravity of steam (at atmospheric pressure) is .411 that of air at 34° Fahrenheit, and .0006 that of water at the same temperature.

27,222 cubic feet of steam weigh 1 pound; 13,817 cubic feet of air weigh 1 pound.

Locomotives average a consumption of 3,000 gallons of water per 100 miles run.

The best designed boilers, well set, with good draft, and skillful firing, will evaporate from 7 to 10 lbs. of water per pound of first-class coal.

In calculating horse-power of Tubular or Flue Boilers, consider 15 square feet of heating surface equivalent to one nominal horse-power.

On oue square foot of grate can be burned on an average from 10 to 12 lbs. of hard coal, or 18 to 20 lbs. soft coal, per hour, with natural draft. With forced draft nearly double these amounts can be burned.

Steam Engines, in economy, vary from 14 to 60 lbs. of feed water and from 14 to 7 lbs. of coal per hour per indicated H. P. See table below for duty of high-grade engines.

Condensing Eugines require from 20 to 30 gallons of water, at an average low temperature, to condense the steam represented by every gallon of water evaporated in the boilers supplying engines-approximately for most engines, we say, from 1 to 14 gallons condensing water per minute per indicated horse-power.

Surface Condensers should have about 2 square feet of tube [cooling] surface per horse-power for a compound steam eugine. Ordinary engines will require more surface according to their economy in the use of steam. It is absolutely necessary to place air pumps below condeusers to get satisfactory results.

#### RATIO OF VACUUM TO TEMPERATURE (FAHRENHEIT) OF FEED WATER.

00	inehe	s Vacuum	, .		-	212°	221	inehes	s Vacuum,				150°	$28\frac{1}{2}$	inches	Vacuum,				92°
11	66	66				190°	*25	4.6	44			_	135°	29	6.6	, 11	_			72°
18	4.6	66	-	-	-	170°	27 ½	4.6	44	-	-		112°	$29\frac{1}{2}$	6.6	66		-	-	520

\*Usually considered the standard point of efficiency-Condenser and Air Pump being well proportioned.

#### WEIGHT AND COMPARATIVE FUEL VALUE OF WOOD.

1 cord Air-dried Hickory or Hard Maple weighs about 4500 lbs., and is equal to about 2000 lbs. coal. 1 44

White Oak weighs about 3850 lbs., and is equal to about 1715 lbs. coal.

66 Beech, Red Oak, or Black Oak, weighs about 3250 lbs., and is equal to about 1450 lbs. coal.

Poplar (whitewood), Chestnut, or Elm, weighs about 2350 lbs., and is equal to about 1050 lbs. coal.

Average Pine weighs about 2000 lbs., and is equal to about 925 lbs. coal.

From the above it is safe to assume that 21 lbs. of dry wood is equal to 1 lb. average quality of soft coal, and that the full value of the same weight of different woods is very nearly the same—that is, a pound of hickory is worth up more for fuel than a pound of pine, assuming both to be dry. It is important that the wood be dry, as each 10 per ceut. of water or moisture in wood will detract about 12 per cent. from its value as fuel.

#### DUTY OF STEAM ENGINES.

A well-known engineer of high authority gives the following comparative figures showing the economy of high-grade steam engines in actual practice:

Type of Engine.	Temperature of Feed Water.	Lbs. of Water Evaporated per lb. of Cum- berland Cost.	Pounds of Steam per I. H. P. used per hour.	Pounds of Cumberland Coal used per I. H. P. per hour,	Cost per I. H. P. per hour, supposing Coal at \$8.00 per ton
Non-Condensing, Condensing, Compound Jacketed, Triple Expansion Jacketed,	210°	10.5	29.	2.75	*0.0073
	100°	9.4	20.	2.12	0.0056
	100°	9.4	17.	1.81	0.0045
	100°	9.4	13.6	1.44	0.0036

<sup>\*</sup> The effect of a good condenser and air pump should be to make available about 10 lbs, more mean effective pressure, with the same terminal pressure; or to give the same mean effective pressure with a correspondingly less terminal pressure. When the load on the engine requires 20 lbs, M. E. P., the condenser does half the work; at 30 lbs, one third of the work; at 40 lbs, one fourth, and so on. It is safe to assume that practically the condenser will save from one-fourth to one-third of the fuel, and it can be applied to any engine, cut-off or throttling. where a sufficient supply of water is available.

#### WATER.

Doubling the diameter of a pipe increases its capacity four times. Friction of liquids in pipes increases as the square of the velocity.

The mean pressure of the atmosphere is usually estimated at 14.7 lbs. per square inch, so that with a perfect vacuum it will sustain a column of mercury 29.9 inches or a column of water 33.9 feet high at sea level.

To find the pressure in pounds per square inch of a column of water, multiply the beight of the column in feet by .434. Approximately, we say that every foot elevation is equal to  $\frac{1}{2}$  lb. pressure per square inch; this allows for ordinary friction.

To find the diameter of a pump cylinder to move a given quantity of water per minute (100 feet of piston being the standard of speed), divide the number of gallons by 4, then extract the square root, and the product will be the diameter in inches of the pump cylinder.

To find quantity of water elevated in one minute, running at 100 feet of piston speed per minute, square the diameter of the water cylinder in inches and multiply by 4. Example: Capacity of a 5-inch cylinder is desired. The square of the diameter (5 inches) is 25, which multiplied by 4, gives 100, the number of gallons per minute (approximately).

To find the horse power necessary to clevate water to a given height, multiply the weight of the water elevated per minute in pounds by the height in feet, and divide the product by 33,000 (an allowance should be added for water friction, and a further allowance for loss in steam cylinder, say from 20 to 30 per cent).

The area of the steam piston, multiplied by the steam pressure, gives the total amount of pressure that can be exerted. The area of the water piston, multiplied by the pressure of water per square inch, gives the resistance. A wargin must be made between the power and the resistance to move the pistons at the required speed—say from 20 to 40 per cent., according to speed and other conditions.

To find the capacity of a cylinder in gallons. Multiplying the area in inches by the length of stroke in inches will give the total number of cubic inches; divide this amount by 231 (which is the cubical contents of a U. S. gallon in inches), and the product is the capacity in gallous.

#### WEIGHT AND CAPACITY OF DIFFERENT STANDARD GALLONS OF WATER.

	,	Cubic Inches in a Gallon.	Weight of a Gal- loa in pounds.	Gallons in a Cubic Foot.	Weight of a cubic foot
Imperial or English	-	277.274 231.	10.00 8.33111	6.232102 7.480519	of water, English standard, 62.321 lbs. Avordupois.

Weight of Crude Petroleum, 6½ lbs. per U. S. gallon, Weight of Refined "6½ lbs. per U. S. gallon, 42 gallons to the barrel.

A "miner's inch" of water is approximately equal to a supply of 12 U. S. gallons per minute.

#### FIRE STREAMS.

Pressures required at nozzle and at pump, with quantity and pressure of water necessary to throw water various distances through different sized nozzles—using 2½-inch rubber hose and smooth nozzles.

G. A. Ellis, C. E.

Size of Nozzles.		1 1:	ıch.			31/n	lnch.			15% 1	neh.			18,	Inch.	
Pressure at nozzle  * Pressure at Pump or )	40	60	80	100	40	60	80	100	40	60	80	100	40	60	80	100
Hydraut with 100 ft.	48	73	97	121	54	81	108	135	61	92	123	154	71	107	144	180
Gallons per minuto	155	189	219	245	196	240	277	310	242	297	342	383	293	358	413	462 224
Vertical dist. thrown		108		148												169

<sup>\*</sup> For greater lengths of 24-in, hose the increased friction can readily be obtained by noting the differences between the above given "pressure at nozzle" and "pressure at pump or bydrant with 100 feet of hose." For instance, if it requires at hydrant or pump 8 ibs, more pressure than it does at nozzle to overcome the friction when pumping through 100 feet of 24-inch bose (using 1-inch nozzle, with 40 lb. pressure at said nozzle), then it requires 16 lbs, pressure to overcome the friction in forcing through 200 feet of same size hose.

#### EQUATION OF PIPES.

It is frequently desired to know what number of pipes of a given size are equal in carrying capacity to one pipe of a larger size. At the same velocity of flow the volume delivered by two pipes of different sizes is proportional to the squares of their diameters; thus, one 4-ineh pipe will deliver the same volume as four 2-ineh pipes. With the same head, however, the velocity is less in the smaller pipe, and the volume delivered varies about as the square root of the fifth power (i. e., as the 2.5 power). The following table has been calculated on this basis. The figures opposite the intersection of any two sizes is the number of the smaller-sized pipes required to equal one of the larger. Thus, one 4-inch pipe is equal to 5.7 2-inch pipes.

	lameter					-				ı			1		1		
-	ismeter Inches	1	3	3	4	5	6	7	. 8	9	10	1.5	14	16	18	20	24
	2	5.7	1										ĺ				
	3	15.6	2.8	1													
	4	35	5.7	2.1	1												
	5	55.9	9.9	3 6	1.7	1								1			
	6	88.2	15.6	5.7	2.8	1.6	1										
ľ	7 .	130	22.9	8.3	4.1	2.3	1.5	1									
	8	181	32	11.7	5 7	3.2	2.1	1.4	1								
	9	243	43	15.6	7.6	4.3	2.8	1.9	1.3	1							
1	10	316	55.9	20.3	9.9	5.7	3.6	2.4	1.7	1.3	. 1				•		
	11	401	70.9	25.7	12.5	7.2	4.6	3.1	2.2	1.7	1.3						
ŀ	12	499	88.2	33	15.6	8.9	5.7	3.8	2.8	2.1	1.6	1					
	13	609	108	39.1	19	10.9	7.1	4.7	3.4	2.5	1.9	1.2					
1	14	733	130	47	22.9	13.1	8.3	5.7	4.1	3.0	2.3	1.5	1				
	15	787	154	55.9	27.2	15.6	9.9	6.7	4.8	3.6	2.8	1.7	1.2				
	16		181	65.7	32	18.3	11.7	7.9	5.7	4.2	3.2	2.1	1.4	1			
	17		211	76.4	37.2	21.3	13.5	9.2	6.6	4.9	3.8	2.4	1.6	1.2			
	18		243	88.2	43	24.6	15.6	10.6	7.6	5.7	4.3	2.8	1.9	1.3	1		
	19		278	101	49.1	28.1	17.8	12.1	8.7	6.5	5	3.2	2.1	1.5	1.1		
	20		316	115	55.9	32	20.3	13.8	9.9	7.4	5.7	3.8	2.4	1.7	1.3	1	
	22		401	146	70.9	40.6	25.7	17.5	12.5	9.3	7.2	4.6	3.1	2.2	1.7	1.3	
	24		499	181	88.2	50.5	32	21.8	15.6	11.6	8.9	5.7	3.8	2.8	2.1	1.6	1
	26		609	221	108	61.7	39.1	26.6	19	14.2	10.9	7.1	4.7	3.4	2.5	1.9	1.2
	28		733	266	130	74.2	47	32	22.9	17.1	13.1	8.3	5.7	4.1	3	2.3	1.5
	30		787	316	154	88.2	55.9	38	27.2	20.3	15.6	9.9	6.7	4.8	3.6	2.8	1.7
	36			499	243	130	88.2	60	43	32	24.6	15.6	10.6	7.6	5.7	4.3	2.8
-	42			733	357	205	130	88.2	63.2	47	36.2	19	15.6	11.2	8.3	6.4	4.1
	48				499	286	181	123	88.2	62.7	50.5	32	21.8	15.6	11.6	8.9	5.7
	54				670	383	243	165	118	88.2	67.8	43	29.2	20.9	15.6	12	7.6
	60				787	499	316	215	154	115	88.2	55.9	38	27.2	20.3	15.6	9.9
Ŀ												1					

LOSS BY FRICTION OF WATER IN PIPES.

This table shows the loss in pounds pressure per square inch for each 100 feet in length due to friction, when discharging the given quantities of water per minute.

				*			8IZES	OF PIPE	S - INSI	DE DIAM	ETER.					
Gais	s. per minute.	% inch	1-inch,	14-inch	1½-inch	2-mch.	21/2-iach	3-inch.	4-inch.	6 meh.	8-inch.	10-ruch.	12;inch.	14-inch	16-inch.	18-inch.
	5	3 3	0.84	0.31	0.12											
	10	13.0	3.16	1.05	0.47	0.12										
	15	28.7	6.98	2.38	0.97											}
	20	50.4	12.3	4.07	1.66	0.42										
[]	25	78.0	19.0	6.40	2.62		0.21	0.10								
	30		27.5	9.15	3.75	0.91										
l	35		37.0	12.4	5.05											
	40		48.0	16.1	6.52	1.60										
	45			20.2	8.15											
	50			24.9	10.0	2.44	0.81	0.35	0.09							
	75			56.1	22.4	5.32	1.80	0.74								
	100				39.0	9.46	3.20	1.31	0.33	0.05						
	125					14.9	4.89	1.99								
	150					21.2	7.0	2.85	0.69	0.10						
	175					28.1	9.46	3.85								
-	200					37.5	12.47	5.02	1.22	0.17						
	250						19.66	7.76	1.89	0.26	0.07	0.03	10.0			
	300						28.06	11.2	2.66	0.37	0.09	0.04				
	350							15.2	3.65	0.50	0.12	0.05	0.02			
	400							19.5	4.73	0.65	0.16	0.06				
	450							25.0	6.01	0.81	0.20	0.07	0.03			
	500					• • • • •		30.8	7.43	0.96	0.25	0.09	0.04	0.017	0.009	0.005
	750									2.21	0.53	0.18	0.08			
	1000									3.88	0.94	0.32	0.13	0.062	0.036	0.020
	1250										1.46	0.49	0.20			
	1500										2.09	0.70	0.29	0.135	0.071	0.040
	1750											0.95	0.38	• • • •		
	2000											1.23	0.49	0.234	0.123	0.071
	2250												0.63		••••	
	2500		• • • •										0.77	0.362	0.188	0.107
	3000												1.11		0.267	
	3500														0.365	0.204
	4000													0.910	0.472	0.263
	4500														0.593	0.333
	5000											••••			0.730	0.408

#### PRESSURE OF WATER.

The pressure of water in pounds per square inch for every foot in height to 300 feet; and then by intervals to 1,000 feet head. By this table, from the pounds pressure per square inch, the feet head is readily obtained, and vice versa.

Feet Head.	Pressure per Square Inch	Feet Head.	Pressure per Square Iuch	Feet Head,	Pressure per Square luch.	Feet Head	Pressure per Square Inob	Feet Head	Pressure per Square Inch	Feet Head.	Pressure per Square Iuch.
1 2	0.43 0.86	53 54	22.95 23.39	105 106	45.48 45.91	157 158	68.00 68.43	209 210	90.53 90.96	261 262	113.06 113.49
3	1.30	55	23.82	107	46.34	159	68.87	211	91,39	263	113.92
4	1.73	56	24.26	108	46.78	160	69.31	212	91.83	264	114.36
5	2.16	57	24.69	109	47.21	161	69.74	213	92.26	265	114.79
6	2.59	58	25.12	110	47.64	162	70.17	214	92.69	266	115.22
7	3.03	59 60	25.55 25.99	111	48.08	163 164	70.61 71.04	215 216	93.13 93.56	267 268	115.66 116.09
8 9	3.46 3.89	61	26.42	112 113	48.51 48.94	165	71.47	217	93.99	269	116.52
10	4.33	62	26.85	114	49.38	166	71.91	218	94.43	270	116.96
11	4.78	63	27.29	115	49.81	167	72.34	219	94.86	271	117.39
12	5.20	64	27.72	116	50.24	168	72.77	220	95.30	272	117.82
13	5.63	65	28.15	117	50.68	169	73.20	221	95.73	273	118.26
14	6.06	66	28.58	118	51.11	170	73.64	222	96.16	274	118.69
15 16	6.49	67 68	29.02 29.45	119 120	51.54 51.98	171 172	74.07 74.50	223 224	96.60 97.03	275 276	119.12 119.56
17	6.93 7.36	69	29,43	121	52,41	173	74.94	225	97.46	277	119.99
18	7.79	70	30,32	122	52.84	174	75.37	226	97.90	278	120.42
19	8.22	71	30.75	123	53.28	175	75.80	227	98.33	279	120.85
20	8.66	72	31.18	124	53.71	176	76.23	228	98.76	280	121.29
21	9.09	73	31.62	125	54.15	177	76.67	229	99.20	281	121.72
22	9.53	74	32.05	126	54.58	178	77.10	230	99.63	282	)122.15
23	9.96	75	32.48	127	55.01	179	77.53	231	100.06	283	122.59
24 25	10.39	76 77	32.92 33.35	128 129	55.44 55.88	180	77.97	232	100.49 100.93	284 285	123.02 123.45
26	10.82 11.26	78	33.78	130	56.31	181 182	78.40 78.84	233	101.36	286	123.45
27	11.69	79	34.21	131	56,74	183	79.27	235	101.79	287	124.32
28	12.12	80	34.65	132	57.18	184	79.70	236	102.23	288	124.75
29	12.55	81	35.08	133	57.61	185	80.14	237	102.60	289	125.18
30	12.99	82	35.52	134	58.04	186	80.57	238	103.09	290	125.62
31	13.42	83	35.95	135	58.48	187	81.00	239	103.53	291	126.05
32	13.86 14.29	84 85	36.39 36.82	136	58.91 59.34	188	81.43	240	103.96	292 293	126.48 126.92
34	14.72	86	37.25	137	59.77	189 190	81.87 82.30	241 242	104.39 104.83	294	127.35
35	15.16	87	37.68	139	60.21	191	82.73	243	105.26	295	127.78
36	15.59	88	38.12	140	60.64	192	83.17	244	105.69	296	128.22
37	16.02	89	38.55	141	61.07	193	83.60	245	106.13	297	128.65
38	16.45	90	38.98	142	61.51	194	84.03	246	106.56	298	129.08
39	16.89	91	39.42	143	61.94	195	84.47	247	106.99	299	129.51
40	17.32 17.75	92 93	39.85 40.28	144 145	62.37 62.81	196 197	84.90 85.33	248 249	107.43 107.86	300	129.95 138.62
42	18.19	94	40.28	145	63.24	198	85.76	250	107.86	330	142.95
43	18.62	95	41.15	147	63.67	199	86.20	251	108.73	350	151.61
44	19.05	96	41.58	148	64.10	200	86.63	252	109.16	370	160.27
45	19.49	97	42.01	149	64.54	201	87.07	253	109.59	390	168.94
46	19.92	98	42.45	150	64.97	202	87.50	254	110.03	400	173.27
47 48	20.35	99 100	42.88	151	65.40	203	87.93	255	110.46	500	216.58 259.90
48	20.79	100	43.31 43.75	152 153	65.84 66,27	204 205	88.36 88.80	256 257	110.89 111.32	600 700	303.22
50	21.65	102	44.18	154	66.70	206	89.23	258	111.76	800	346.54
51	22.09	103	44.61	155	67.14	207	89.66	259	112.19	900	389.86
52	22.52	104	45.05	156	67.57	208	90.10	260	112.62	1000	433.18
L						ñ		0		Ρ	

# GALLONS DISCHARGED PER HOUR THROUGH VARIOUS SIZED ORIFICES UNDER STATED PRESSURES.

Feet	s pres- per inch		DI	AMETERS (	of orifici	ES IN INCE	IES AND F	RACTIONS	OF AN INC	н.	
Head in	Pounds sure I squire	Inch.	3% Inch.	lnch.	% Inch.	1nch.	1 lncb.	1¼ Inch.	1½ Inch.	1¼ Inch.	2 Inch.
20 40 60 80 100 120 140	8.66 17.32 25.99 34.65 43.31 51.98 60.64	300 450 540 620 690 780 816	720 960 1200 1380 1560 1680	1260 1800 2160 2460 2760 3000 3300	1920 2760 3480 3840 4320 4740 5100	2760 3960 4800 5580 6240 6840 7320	4920 6720 8580 9840 11040 12120	7380 10920 13380 15480 17280 18960 20160 21180	11100 15720 19200 22260 24900 27240 29460 30480	15120 21360 26220 30300 33900 37440 39080 41460	19740 27960 34260 39540 44280 48480 52320 54120
150 175 200 235	64.97 75.80 86.63 101.79	840 900 960 1080	1920 2040 2220 2460	3420 3660 3900 4320	5280 5700 6120 8280	7620 8220 8760 11160	13560 14640 15600 17100	22800 25020 26760	32880 35880 38520	414940 44940 47880 52260	58560 62580 68460

The pressure or head of water is taken at the orifice, no allowance being made for friction in the pipe. In practical calculations to determine the height which water can be thrown, the head consumed by the friction of the water in flowing from the source to the orifice must be considered.

#### AREA OF CIRCLES.

Diam.	Area	Diam.	Area.	Diam.	Area.	Diam.	Area.	Diam.	Area.
	0.0123	73	44.178	221	397.60	50	1963.5	80	5026.5
1 .	0.0491	8	50.265	23	415.47	51	2042.8	81	5153.0
3.	0.1104	81	56.745	231	433.73	52	2123.7	82	5281.0
나는 아니는 보다 되었다.	0.1963	9	63.617	24	452.39	53	2206.1	83	5410.6
5	0.3067	91	70.882	241	471.43	54	2290.2	84	5541.7
3	0.4417	10	78.54	25	490.87	55	2375.8	85	5674.5
2	0.6013	103	86.59	26	530,93	56	2463.0	86	5808.8
1 "	0.7854	11	95.03	27	572.55	57	2551.7	87	5944.6
11	0.9940	1113	103,86	28	615.75	58	2642.0	88	6082.1
11	1.227	12	113.09	29	660.52	59	2733.9	89	6221.1
12	1.484	124	122.71	30	706.86	60	2827.4	90	6361.7
1 1	1.767	13	132.73	31	754.76	61	2922.4	91	6503.8
18	2.073	131	143.13	32	804.24	62	3019.0	92	6647.6
13	2.405	14	153.93	33	855.30	63	3117.2	93	6792.9
17	2.761	141	165.13	34	907.92	64	3216.9	94	6939.7
2	3.141	15	176.71	35	962.11	65	3318.3	95	7088.2
21	3,976	15}	188.69	36	1017.8	66	3421.2	96	7238.2
$\frac{2\frac{1}{2}}{2}$	4,908	16	201.06	37	1075.2	67	3525.6	97	7389.8
21	5.939	165	213.82	38	1134.1	68	3631.6	98	7542.9
3	7.068	17	226.98	39	1194.5	69	3739.2	99	7697.7
31	8.295	173	240.52	40	1256.6	70	3848.4	100	7854.0
31/2	9,621	18	254.46	41	1320.2	71	3959.2	101	8011.9
33	11.041	183	268,80	42	1385.4	72	4071.5	102	8171.3
4	12.566	19	283.52	43	1452.2	73	4185.3	103	8332.3
43	15,904	193	298.64	44	1520.5	74	4300.8	104	8494.9
5	19.635	20	314.16	45	1590.4	75	4417.8	105	8659.1
51	23.758	203	330.06	46	1661.9	76	4536.4	106	8824.8
6	28.274	21	346.36	47	1734.9	77	4656.0	107	8992.0
64	33.183	214	363.05	48	1809.5	78	4778.3	108	9160.9
72	38,484	22	380.13	49	1885.7	79	4901.6	109	9331.3

#### CAPACITY OF ROUND TANKS AND CYLINDERS IN CUBIC FEET AND IN U. S. GALLONS

#### (FROM TRAUTWEIN.)

Of 231 cubic inches (or 7.4805 gallons to a cubic foot); and for one foot of length of the cylinder. For the contents for a greater diameter than any in the table take the quantity opposite one-half said diameter, and multiply it by 4. Thus, the number of cubic feet in one foot length of a pipe 80 inches in diameter is equal to 8.728×4=34.912 cubic feet. So also with gallous and areas.

6.8	mals	For 1 foot	in length.	68.	alam 8	For 1 foot	in length.	.es.	mals	For 1 foot	in length.
Diameter in inches.	Diameter in decimals of a foot.	Cubic ft., also area in sq. ft.	Gallons of 231 oubic ins.	Diameter in Inches.	Diameter in decimals of a foot.	Cubic ft., also area iu sq. ft.	Gallons of 931 cubic ins.	Diameter in inches.	Diameter in decimals of a foot.	Cubic ft., also area in sq. ft.	Gallons of 231 cubic ins.
1 + 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	.0208 .0260 .0313 .0365 .0417 .0469 .0521 .0521 .0677 .0729 .0781 .0833 .1042 .1258 .1667 .1875 .2083 .2292 .2500 .2708 .2913 .3125 .3333 .3542 .3750 .3958 .4167 .4375 .4383 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 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.4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583 .4583	.0003 .0005 .0008 .0010 .0014 .0017 .0021 .0021 .0026 .0031 .0036 .0048 .0048 .0055 .0123 .0188 .0218 .0218 .0218 .0218 .0341 .0413 .0413 .0411 .0576 .0667 .0767 .0873 .0985 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105 .1105		62 7 7 7 7 8 8 8 4 8 8 8 8 8 8 9 9 9 9 9 9 9 9 9 9 9	.5625 .5833 .6042 .6045 .6045 .6045 .6045 .7082 .7500 .7708 .7917 .8125 .8333 .8542 .8550 .8958 .9167 .9375 .9583 .9102 .1 084 .1 125 .1 1208 .1 1208	2485 .2673 .2688 .3068 .3275 .3490 .4175 .4418 .4668 .4923 .5185 .5455 .5530 .6003 .7213 .7530 .6003 .7213 .7530 .6003 .7213 .7530 .6003 .7214 .7524 .8223 .9218 .9940 .147 .1, 227 .1, 310 .1, 485 .1, 167 .1, 167 .1, 167 .1, 167 .1, 167 .1, 167 .1, 167 .1, 167 .1, 167	1.859 1.999 2.144 2.295 2.450 2.451 2.777 2.948 3.125 3.306 3.175 3.306 3.879 4.081 4.286 4.714 4.936 4.714 4.936 5.395 5.633 5.876 6.375 6.375 6.375 7.435 7.435 7.997 8.578 9.180 9.801 10.44 11.11 11.79 12.50	19 19 19 200 19 200 19 200 19 200 19 200 19 200 19 200 19 200 19 200 19 200 19 200 19 200 19 200 19 200 19 200 19 200 19 200 19 200 19 200 19 200 19 200 19 200 19 200 19 200 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3.083 3.166 3.250 3.333 3.416 3.333 3.416 3.500 3.583 3.500 3.583 3.683 3.683 3.750 3.883 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 3.893 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3.687 4.276 4.276 4.276 6.305 6.681 7.069 7.468 7.876 8.728 9.168 8.728 9.168 9.169 10.984 10.594 10.594 11.546 12.048 12.566	14. 73 15. 52 16. 32 17. 15 17. 19 18. 86 20. 68 21. 53 22. 58 21. 53 23. 50 27. 58 29. 74 31. 99 34. 31 41. 78 44. 43 49. 98 52. 86 58. 92 62. 62 68. 58 75. 40 75. 40 75

# INDEX.

ACETYLENE Burners and Tips - 163, 164	Automatic Water Feeders 151, 152	Boiler Cleaners, Automatic Feed 50
Acme Instantaneous Water Heaters 530	Auxiliary Valves for Fire Hydranta 14	" Couplings, Brass 47
Adjustable Ceiling and Floor Plates 52 Leg for Stalls 313 "Pipe Hangers, Malleahle 50 Railing Fittings 67 Air Cocks 122 "for Lead Pipe 122 "for Lead Pipe 122 "for Lead Pipe 124 "for Lead Pipe 124 "for Lead Pipe 125 "lote 125 "	BACK December Volume	Circulating, Mai, (
" Pipe Hangers, Mallcahle 50	BACK Pressure Valves         96           "Water Valves         525           Backs, Roll Rim         445, 447           Bag Traps, Lead         520           Ball Cocks         482           "Joints, Flexfhle         562           Stems, for Fuller Work         502           Balls, Copper         482           "Fuller         502           Bard Adjustable Bushings         228           Barnows         226           Barrows         246           Base Fittings, Cast-Iron         43           Bases for Valve Boxes         12           Basic Inhairs         467           " Camps         467           " Broughton Self-Closing         506           " Broughton Self-Closing         504	" Oil Injectors 15 " Standa, Hangers and Brackets 15 " Towel Racks 55 " Tubes 556-56 Boilers, Range 556-56 " Trumph 1-1 " Water 142-16 Bolts, Expansion Case 167 " for Closet Door 3
" Railing Fittings - ' 67	Backs, Roll Rim 445, 447	" Towel Racks 5
Air Cocks 122	Bag Traps, Lead 520	" Tubes
" 10r Lead Pipe 520	Ball Cocks	Boilers, Range 526-52
" Inlet Caps, Drainage, CI 57	" Stems, for Fuller Work 502	" Water 142-14
" Valves, Automatic 83, 84	Balls, Copper 482	Bolts, Expansion Case 5
" Float 113	Par Strainer	for Closet Door 81
" Raciator 83, 84	Bard Adjustable Bushings 226	Machine
" Vents, Champion 529	Barnes Pipe Cutters 219	" Toggle 58
Alarm and Pressure Recording Gauges - 118	Barrows	Boss Washers 19
Alarm and Pressure Recording Gauges - 118 Alarms, Low Water - 118 Alcohol Torches - 230 Alleyactor Wreuches - 292 Altitude Gauges - 119 American Corporation Hydraots - 16 "Fire Hydrants - 16 Gate Valves - 100, 110 "Per Sofety and Relief Valves 138	Bases for Valve Boxes 12	Boston Self-Closing Urinal Cocks
Alcohol Torches 230	Basin Chains 467	Bottom Supply Ball Cocks 48
Aleoves, Copper 395	Clamps 467	Bower Traps and Parts 53
Altitude Gauges	" Cocks, Boston Self-Closing 504	Boxes, Meter
American Corporation Hydraots 16	" Compression 492	" Service 11. 1
" Fire llydrants - · · 16	Cocks, Boston Self-Closing 504  Broughton Self-Closing 504  Compression 482  Doherty Self-Closing 507  Fuller 498-501  Plugs and Grates 488-470  Basins, Eartherware 399, 400  Bath Chamber 100 411  Bath Chamber 458  Cock blue Covers 458	Bower Traps and Parts   55
" Gate Valves 100, 110	" Fuller 498-501	Valve 12, 1
C 10 cd 1 N N N N N N N N N N N N N N N N N N	" Plugs and Grates 468-470	Bracket Basin Cocks 50
" Single Gate Valves 113	Basins, Earthenware 399, 400	Brackets and Foot Rail Fittings 6
Angle Check Valves, Brass 72	" Enameled Iron 411	Boiler 52
" Iron Body 80	" Cock Hole Covers 456	" Gas 161 16
" " Jenkins Dise - 74, 91	" Cocks, Compression 492	" Lavatory and Sink • 460, 46
Self-Closing Hydrants and Parts 18, 19     Single Clate Valves   113     Angle Check Valves, Brass   72     E I Heavy, Brass   75     I I I I I I I I I I I I I I I I I I	Cock   Iole Covers   456   Cock   Compression   492   Fuller   501, 502   Plugs   408-470	Branch Tees, Cast-Iron 4
Bailing Fittings 45° 68	" Room and Layetory Trimmings 469-465	Vent
" Safety Valves, Iron Body 90	" Trsps 524	" Y. " 512, 51
Safety Valves, Iron Body - 90	" Tuh Trimmings 455, 456	Branding Stamps 24
1 Iron Body 93	Baths, Copper	Brass Caps 7
" Corner Radiator 83	" Poreelain 330, 331	" Cocks 85-8
Extra Heavy, Brass - 75 Iron Body 92	" Lined 332-359	" Ferrules 474, 47
lron Body 92	Portable 355, 356, 359	" Fittings 70, 7
Flanged, Brass - 73  Iron Body - 88-90  Jenklus Disc, Brass - 74  Iron Body - 91  Steel - 92	" Shower 360_372	Gate Valves American
" Jenklus Disc, Brass 74	" Sitz, Porcelain Lined 357	Eddy 10
" Iron Body - 91	" "Special C" 343-849	Lavatory Legs 45
with Lock Shield, Brass - 73	" "Verona"	" Uil Cans
Anti-Siphon Trap Vents 524	" Zine 358	" Pipe 7
Anvils 226	Beam Hooks 49	" Wrenches, Hall 21
Auti-Siphon Trap Vents	Puller 501, 502 Plugs 48-470 Room and Lavatory Trimmips 482-465 Traps 524 Traps 538 Traps 455, 456 Baths, Copper 538 Foot, Porcelain Lined 330, 331 Porcelain 538 Porcelai	"Gas 161, 16 "Lavatory and Sink 460, 46 Branch Tees, Cast-Iron 4 Branches, Tee, Soil Pipe 511, 51 "Vent," 51 "Yent," 51, 51 Branding Stamps 24 Brass Caps 7 "Closet Flanges 5, 5 "Cocks 5, 58-8 "Perrules 70, 7 "Floor and Ceiling Plates 70, 7 "Floor and Ceiling Plates 70, 7 "Floor and Ceiling Plates 10, 7 "Floor and Ceiling Plates 11, 7 "Eddy 10 "Lavatory Legs 3, 3 "Guber States 13, 13 "Cups 13, 13 "Cups 13, 13 "Pipe 13, 14 "Portable Pop Safety Valves 13, 13 "Cups 13, 13 "Cups 13, 13 "Cups 13, 14 "Portable Pop Safety Valves 13, 13 "Cups 13, 14 "Portable Pop Safety Valves 13, 13 "Stann Fittings Extra Heavy 4 "Tubiug, Scamless, Drawn 7 "Valves 14 "Wire Cloth 12, 12 "Brazing Tanka 15 "Browe Glaz Lauudry Tubas and Sinks 416, 42 "Brown Glaz Lauudry Tubas and Sinks 416, 42
Argand Burners and Chimneys 164	Bells, Gong 136	Rods, Threaded 31
Armstroug Hinge Vises 225	Beltiug 195	" Sewer Valves 52
" Pipe Threading Machines - 288	Bunda Drainaga Cast-Iron	" Steam Fittings, Extra Heavy 4
Stocks and Dies - 216	" for Cast-Iron Pipe 4	Valves 72-8
Disc Brass Valves 77	" Lead 522	" Water Relief Valves 13
" Materiala Miscellaneous 197	" Return Brass 63	Breazing Topks
" Packed Iron Cocks 93	" Cast-Iron 81	Brine Cocks 15
Materials, Miscellineous - 197 Packed Iron Cocks - 93 Pipe Covering - 148 Ash Cana - 157	" Malleable 62	Brine Cocks 15 Broughton Self-Closing Work - 508, 50 Brown Glaze Lauudry Tuhs and Sinks 416, 42
	Wrought Iron 62	Brown Glaze Laudry Tubs and Sinks 416, 42
Atmospheric Heaters 166, 167 Augers, Gas Fitters' 228 "Auto-Jet" Enameled Iron Closeta 276	Bihh Reamers, Detachable 250	Brush Travs 46
Augers, Gas Fitters' 228	" Washers 197	"Buena" Siphon Jet Closets 264, 26
"Auto-Jet" Enameled Iron Closeta 276 "Auto-Marine" Closeta 277	Blhhs, Broughton Self-Closing 508	Buffalo Forges 22
Automatic Air Valves Radiator 83 84	Lead   522     Quarter, Wrought Iron   63     Return, Briss   70     Cast-Iron   31     Cast-Iron   31     Malleable   62     Soil Pipe   510, 511     Bihh Reamers, Detachable   230     Washers   581   Closing   197     Bihhs, Broughton Self-Closing   500     Compression   485   491     Fuller   493   497     Ground Ping   493     Loose Key, Compression   448     Loose Key, Compression   491     Self-Closing   503   507     Block Covering   148     Tip Pipe and Block Tin   6	Bunsen Burners 16
Feed Cleaners, Dehn's 529	" Ground Plug 488	Burner Cleaners, Gas 16
Flush Range Closets - 290, 300	Loose Key, Compression 491	Purpore and Tipe Acctrions
Feed Cleaners, Dehn's 529 Flush Range Closets - 290, 300 Frost Proof Closets - 283, 286 Ilopper Closets - 279, 280, 282	Block Covering 148	Gas 158-16
" Iron Washdown Closees 281	" Tin Pipe and Block Tin 6	" Self-Lighting 16
"Juvenile" Closets 278	Blocks, Differential, Weston's 245	Bushings, Bard Adjustable 22
Iron Washdown Closets   281   "Juvenile" Closets   228   278   Pressure Regulators   97, 08   Siphon Jet Closets   271, 275, 276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276   276	" Valves Brass 154	Cast-Iron
Tanks, Urinal and Hopper - 826 Urinals 815-823	The Pipe and Block Tin	" Faced, Malleable 6
Urinals 815-323	Boller and Engine Trimminga 115-138	Brown Glaze Lauudry Tuba and Sinks 416, 42

PAGE	PAGE	Cocks, Basin, Fuller
Bushings   Malleable   61     Railing   66     Butterfly Valves   Brass   78     " Greenhous   213     " Iron Body   90     By-Passes   Brass   for E   H Valves   108	Clamps, Basin 467	Cncks, Basin, Fuller 498-501
Railing · · · · · · 66	Closet and Hopper 311  for Girders 50  Steam and Water Pipe - 45	Telegraph Self-closing 500
Butterfly Valves, Brass 78	for Girders 50	Bath, Fuller
Greenhouse 213	Steam and Water Pipe 45	Composition 109 170
Du Passage Brace for F. H. Valves - 108	" Stalls	" Cylinder 121
for Incandescent Lights 167	" Hose and Mender 184	" Extra Heavy Brass 85, 86
101 Incandescent Lights 101	" Hose und Mender 184 Clarke Damper Regulatora 152	" Iron 04
CACTUS Lawn Sprinklers 187		Gas Meter and Service 86, 87
Caldron Kettles 241	Cleaners, Flue 228, 229	" Stove, Roundway 87
Caldron Kettles - 241 California Hydrants and Street Washers 18	Water-back Boiler, Heater - 529	" Gauge 116, 121
California Pattern Hopper Cocks 500	Cleanouts, Cast-Iron 525	" Hopper 508, 509
Calking Chisels 243, 248	Clevaue Automatic Air Valves 84	Hydrant 401
170ns 243, 244	Classification and Price List Mal. Pittings 65 Cleaners, Flue 928, 229 Water-back, Boller, Heiter 529 Cleanouts, Cast-Iron 525 Cleaue Automatic Air Valves 84 Climax Cellar Drainers 213 Ratchet Stocks 216 Classification 215 Ratchet Stocks 216	U Look Motor and Service - 87
the Oil and Wester	Closet and Urinel Stell Trimmings 219 214	" Paper Roston Self-Closing 506
Convey Stitched Bulting a a a a a 105	" Rose Fittings 519	" Compression 492
Cans Air Inlet Drainage 57	" Bowls Earthenware 302-307	" Doherty Self-closing 507
Brass 69, 71	" Enameled Iron 297	" Fuller 499
California Hydrants and Street Washers         18           California Pattern Hopper Cocks         500           California Pattern Hopper Cocks         500           California Pattern Hopper Cocks         243, 244           Cans         138           Cans         136-138           Cans Ash         105           Cans         169-138           Cansa Stitched Beltling         105           Caps, Air Inlet, Drainage         57           Brass         69, 71           Cast-Iron         29           "Drive, Mallenble         211           "Yent         516           Car Eartheware         307           Case Bolts, Expansion         53	Ratchet Stocks   216	Doherty Self-closing
" Drive, Mallenble 211	" Connections, Rubber 312	Roundway, E. H., Iron 04
for Cast-Iron Pipe 4	" Door Indicator Bolt 313	Kough Stop 115, 179
Malleable 00	Ellows, Cast Iron 56	" Shower - 484 490 491
Cor Fortherwore 907	Flanges, Cast-Iron and Brass 56	" Steam Brass 85
Case Rolts Expansion	" " Slabs Marble 311	" E. H., Brass 85
Casing, Well 24	" Flush and Supply Pipes 310	" Stop and Waste, Clow Improved 508
Cast-Iron Ceiling Plates 51, 52	" Pans 532	" Urinal 327-329
Car Earthenware	Flanges, Cast-Iron and Brass   56	Steam, B. H. Brass 508  Stop and Waste, Clow Improved 508  Urinal 232, 326  Cost Wrenches 222  Coils, Steel Tanks with 146  Cold Chiscls 243, 248  Cold-Weld Boilers 525  Columbia Spihon Jet Closets 255  Columbia Water Tapping Machines 237  Columbia Solid Steel Scrapers 247  Steel Sinks 445  Columns, Water 116, 117  Combination Ferrules 525  Combination Ferrules 523  "Hoppers and Traps, Automatic 284  "Hoppers and Traps, Automatic 284  "Hoppers and Traps, 303, 305  "Hoppers and Traps, 223  Soldering Nipples 223  Soldering Nipples 534  Waste and Overflow Con. 455, 456
" Culvert Pipe 1	" Pulls 311	Coils, Steel Tanks with 146
" Flttings 26-43	" Repair Couplings 312	Cold Chisels 243, 248
Drainage 54-57	" Screws	Cold-Weld Bollers
Ex. Heavy, Screwed 38-42	" Table and South 200 900	Columbia Water Tanning Machines - 237
Stand List of 533 534	" Tees Drainage Cast-Iron 56	Columbus Solid Steel Scrapers 247
" with Base 42	Closets 251-307	" Steel Sinks 445
'' Flanges 36	" "Auto-Jet," Enameled Iron 270	Columns, Water 116, 117
" Floor Plates 51, 52	"Auto-Marine" 277	Comb and Brush Trays 462
" Pipe 2	" "Buena" Siphon Jet 264, 265	Combination Ferrules 523
Culverts 1	"Circle" Siphon Jet 290	". Hoppers and Traps, Automatic 284
with Base 42  "Flanges 36  "Floor Plates 51, 52  "Pipe 2  "Culverts 1  "Flanged 2  "Sinks 447  Soil Pipe and Fittings 510-519  Specials 3-5  "Traps, Soil Pipe 517-519  Urinals 221-323, 325  Cast Steel Fittings 44  Catch Basin Covers, Limestone 10  Curbs 9, 10  Catch Basins and Blow-offs, Steam 154  Cetling Plates 51, 52	"Circle" Washout 291	Bowls 303, 803
Sinks	"Colonial" Siphon Jet 255 Deep Seal Siphon Hopper 267, 270 Double Trap Siphon - 288 Frost Proof 285, 286 Hopper 283, 297 Hopper, Automatic 273, 279, 286 "Juvenile," Automatic 273, 274 "Juvenile," Automatic 278 Low Down Tank 269, 270 Madden's Patent 234-298 "Ornamental" Siphon Jet 256	Shell Drills
Specials - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 -	" Double Trep Siphon 268	Soldering Nipples 521
" Trans Soil Pine 517-519	" Frost Proof 285 286	" Waste and Overflow Con. 455, 456
" Urinals 321-323, 325	" Hopper 293, 297	Waste and Overflow Con. 455, 456 Common Overflow Basins, Earthen 399, 400
Cast Steel Fittings 44	" Hopper, Automatic - 273, 279, 280	Common Sense Grease Cups 132
Catch Basin Covers, Limestone 10	" Royal Porcelain - 273, 274	Companion Flanges 37
" Curbs 9, 10	"Juvenile," Automatic 278	Compression Basin Cocks 492
Catch Basins and Blow-offs, Steam 154	" Low Down Tank 269, 270 " Madden's Petent 254, 298	Bath Cocks 492
Ceiling Plates         51, 52           Cellar Drainers         213           Cement Asbestos Felting         148	Madden's Patcht 204-298	Penter Cocks 499
Coment Ashestos Felting	" Plunger "Royal" 200	" Shower Cocks 490, 491
" Gas Fitters' and Gumbo 251	" Range 298-301	" Sill Cocks 179
Cesspool Plates 449	" Siphon Jet 298	" Stops 489-491
Cesspools 450	" "Renaissance" Siphon Jet 255	" for Supply Pipes - · 456
Chain Guide for Stalls 314	" "Rococo" Siphon Jet 256	Urinal Cocks 328
Cement Asbestos Fetting         148           "Gas Fitters' and Gumbo         251           Cesspool Plates         449           Cesspools         450           Chain Guide for Stalls         314           "Tungs and Wrenches         221           Chains, Chain Stays and Snaps         466, 467           Champion Hir Vents         529           Champion Water Heaters         147           Champion Heaks and Loops Wallenhei         61		** Waste and Overflow Con.   455, 456   Common Overflow Basins, Earthen   Common Sense Grease Cups
Champion Air Vents - 400, 407		for Urinal Tanks 326
Champion Water Heaters 117	Bowls 302 Earthenware - 254-290 Enameled Iron, 271, 276	" Sink 445-447
Chandelier Hooks and Loops, Malleable - 61 Check Valves, Brass - 72 Extra Heavy, Brass - 75	" " Enameled Iron, 271, 276	" Uriaal 327
Check Valves, Brass 72	" " Raage 298	Convex Strainers 471
Extra Heavy, Brass 75	" Washdown 266, 272, 281, 290	Cooler Cocks 180
1 Iron 111 1 Iron Body 89	" Raage 298 " Washdown - 266, 272, 281, 290 " Jet Action 296 " Siphon 297 " Washout 287	Copper Alcoves 305
Iron Body 89	" Siphon 290	Balls 482
	Clow Connection for Corporatiou Cocks - 170	Boilers - 508
" Swinging Brass 78	" Fusible Plugs 118	" Bolts 249
" Iron 89	" Fusible Plugs 118 " Hopper and Stop and Waste Cocks, 508	" Closet Pans 532
Check and Waste Cocks 476-481	" Improved Calking Irons 244	" Expansion Joints, Corrugated - 95
" Swinging, Brass - 78 Iron - 89 Check and Waste Cocks - 476-481	" Hopper and Stop and Waste Cocks, 508 " Improved Calking Irons 244 " Melting Furances 240 " Putent Lead Pipe Connections 172 " Wuter Connections 172 " Wuter Connections 172 Cock Hole Curvers 456, 466 Cocks, Air 122 " for Lead Pipe 529 " " Rendering Tanks 156 " Ashestop Packed Iron 93	Pautry Sinks 435, 448
Chestertan's Glass Tube Cutters 115	Putent Lead Pipe Connections 172	Tubes, Seamless Drawn 71
Chinale Chinale	Cash Water Connections 171	Wire 250
Circum Holdon	Cooks Air	Corner Angle Register Valves 450
Lighters 188	" for Lead Pine - 500	" Radiator Valves 82
Cipher, Telegraph 535 536	" " Rendering Tanks 156	" Sloks 448
"Circle' Siphou Jet Closets 290		
	" Asbestos Packed Iron 93	" Slabs 300, 397
" Washout Closets 291	" Asbestos Packed Iron 93 " Ball 482	Expansion Joints, Corrugated   95
Washout Closets 291 Circuit Fittings 153	" Ball 482	Stop Cocks 169, 170
Simplex   470, 477     Chienerys, Glass Tube Cutters   115     Chimers, Glass and Mica   164     Chisels   243, 248     Cigar Holders   314     Lighters   166     Cipher, Telegraph   535, 536     Washout Closets   290     Washout Closets   291     Circular Radiators, Return Bend   140     Circular Radiators, Return Bend	" Basin and Bath, Compression - 492 " Boston Self-closing - 506	Stop Cocks 169, 170 Corrugated Metal Gaskets and Mapholes 197
Washout Closets   291 Circuit Fittings   1.33 Circular Radiators, Return Bend   140 Circulating Boiler Couplings, Mal.   63   Water Heaters   530	Basin and Bath, Compression - 482	Stop Cocks 169, 170

Country (Cons. Month).	PAGE	PAGE
Counter Tops, Marble 397 Couplings, Boller, Brass 472	Doherty Self-closing Work 507	Expanders, Tube 225 Expanding Wire Fluc Brushes 229
Couplings, Boller, Brass 472	Domes, Ret Water, for Furnaces   146	Expanding Wire Fluc Brushes 220
Grewating Mal 63	Door Bolts, Stops and Hinges 313	Expansion Case Bolts 53  Hook Plates 49  Joints, Brass 86
Brass 71 Drive Pipe 24	Double Branch Elbows, Long Turn 39	" Hook Plates
" Drive Pipe 24	" Hubs 516	" Joints Brass
Hose and Siamese 183, 184	" Tran Siphon Closets 268	" Correcuted Corporation
Hose and Siamese - 183, 184 Malleable, R and L - 60 Offset Reducing, Malleable 61	" Y Branches Soil Pine 510	Corrugated Copper - 95 Iron Body - 95 Pipe Hangers and Parts - 50
" Offset Reducing Malleable - 61	Drain and Tran Floor	Discording Dody 95
" Plain Soldering 472	Druingge Fittings Cost Ince	Tipe Hangers and Parts 50
Pump Rod Malleable 211	Distance introgs, Castaron 04-57	Tanks - 151, 152
" Recessed	Deitte Graduated 519	Extension Dials for Meters 21
Fun Stidering	Trap Siphon Closets	Tipe Imagers and Taris
Steel 44	Drinking Fountains, Copper 395	Preces, Malleable 61
Woter Poek	Enameled from 412	" Soil Pipe 516
Whomala T	Iron 252	Trench Braces 245
Corner Cutch Pools	Marble 395	" Wrenches for Screwing Taps 244
Covers, Catch Basin 5, 10	Porcelain 394	Extra Heavy Brass Steam Fittings 48
	Drinking Fountains, Copper   385	Extra Heavy Brass For Screwing 14ps 244  "Cast-Iron Fittings 38-42  "Cocks, Brass 55, 66  "Flanged, Brass 85  "Iron For Screwing 14ps 244  "Clobe and Angle Volume 14
Coverings, Pipe and Boiler	" Cups 471	" Cocks, Brass 85, 86
Crang-Pin Oil Cups, Michigan 129	" Pipe ano Pan 807	Flanged, Brass 85
Otlers, Penberthy 133	Drive Caps, Malleable 211	" Iron 94
Crescent Instantaneous Water Heaters - 531	" Pipe Coupling Joints 24	
Crosby Pop Safety and Relief Valves - 135	Drop Elbows, Malleable 58,59	" Malleable Fittings 43
Crosses, Brass 70	" Forged Steel Fittings 44	" Valves Briss 75
" Extra Heavy · · 43	Tecs, Malleable 59	Valves, Brass 75 Gate 107, 108
" Cast-Iron 28	Drop Elbows, Malleahle   58,59   Forged Steel Fittings   44   Tecs, Malleable   59   Drum Traps   523	Clare 101, 103
Crescent Instantaneous Water Heaters - 581		FACED Bushings, Mallcable 61
" " Screwed 38	EARTHENWARE Basins - 899, 400	Fancy Strainers 471
" " Flanged 84		Faucets Broughton Salf aloging
Flanged 84 Drainage, Cast-Iron 55	Lavatories 301   Urinals 324   Eccentrics for Fuller Work 502	Compression 503
" for Cast-Iron Pine 4	1 Uringle 391	Compression 485-492
" Long Turn, C. I	Eccentries for Puller Worls	tt Channel Diam
" Malleable 60	Edines Mineral Word Dine Covering	Falt Ground Flug 483
Drainage, Cast-fron   35	Second Recording and Abara Games   Second Recording   Second Recordi	Fancets Broughton Self-clusing 543 Faucets Broughton Self-clusing 548 Compression 485-492 Fuller 498-502 Fuller 498-502 Felt 498 Ferrules, Briss 474, 475 Combination 523 I now with Trap Screw 475
" Soil Pine " 819	Eddy Check Valves	rerrules, Brass 474, 475
" Steel 44	Eduy Cucck Varves III	Combination 523
Cross-over Fittings Mallooble 50	Part Values Inc.	Combination   252   252   253   254   254   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   255   25
Cross Valves, Asbestos Dise, Brass 77	to Cote Valves, fron 112	Files 248
	Cate Valves 102-108	Fillers, Engineers' 137, 138
" Brass 72 Tron Body 89	Edson's Recording and Alarm Ganges - 115	Filters, Water 154
1100 Body 89	Eighth Bends for Cast-Iron Pipe 4	Fire Hydrants 14-16
Jenkins Disc, 1 15 91	Soil Pipe 511	Fish Traps 21
Crow bars and rampers 242	Ejectors, Carfield 126	Fisher Reducing Valves 99
Cuden Bath Traps 524	or Jet Pumps, Hancock 124	" Steam Pump Governors 99
Tron Body	Penberthy 125	Stan Pump Governors   99
Curbs, Catch Basin and Manhole 9, 10 Curtis Pressure Regulators 98	Elbow Shank Oil Cups, Brass 130	Brass 70.71
Curtis Pressure Regulators 98	Elbows, Brass 70	" Railing 66 68
" Return and Balanced Steam Traps 150	" Extra Heavy 43	" Cast-Iron 26-48
Steam and Grease Separators 150	" Cast-Iron 26	" Drainage 54-57
Curves for Sewer Pipe 7	" Extra Heavy 38 39	" E. H. Flanged - 89-48
Cushions, Water 529	Flanged 33, 39	" Screwed 88
Cyclone Lawn Sprinklers 187	with Base 42	" Flanged 30-48
Cylinder Cocks 121	" Closet, Cast-Iron 56	" I. T. Flanged - 35 41
" Oil Pumps, Hand 132	" Drainage, Cast-Iron 54	" Screwed - 32 54
Tectura and Endances Secan Traps   197	for Sewer Pine 7	Drainage 34-04 E. H., Plunged 39-48 Screwed 38 Flanged - 30-48 L. T., Flanged 35, 41 Screwed 32, 54 Circuit - 153 Contract - 153
Description of the second of t	" Lawler Patent 531	" Circult 153
DAMPER Regulators 151, 152	Long Turn, Cast Iron 32	Cross-over, Malleable 59
Davis Automatic Air Valves 83	" Mallenble 58-64	" Distributing O.S 153
" Back Prossure Valves 96	" Extra Henvy	" Drainage Cast-Iron 54-57
Balance Vulves 96	" Radiator Union 82	" for Cast-Iron Water Pine - 9 4
" Pressure Regulators 97	" Railing 66-68	" Galv. Mal. Price List of 65
DAMPER Regulators         151, 152           Davis Automatic Air Valves         83           Back Prossure Valves         96           Balance Valves         96           Pressure Regulators         97           Steam Traps         149	" Ruhber 812	Circuit   153
Deep Seal Siphon Hopper Closets - 267, 270	" Side Ontlet, Cast-Iron 30	" Lock Seam and Pine 155
Dehn's Automatic Feed Cleaners 529	" Steel 44	" Madleable 59.85
Deep Seal Siphon Hopper Closets - 267, 270 Dehn's Automatic Feed Cleaners - 529 Derricks 236	" Union 64	Extra Heavy - 43
Designs for Railings 69	Radiator · · · · · · · · · · · · · · · · · · ·	" Railing Brass and Cust-Iron ce so
Detroit Lubricators 127, 128	Elevator Tubing	Sewer Pine
Dials, Extension, for Meters 21	Enameled Iron Basins 411	and the second s
Diamond Vises 226	" Closet Bowls	" Steel Cost and Dron Forced 44
Diaphragm Trench Pumps 239	" Comb Hoppers and Trans 909	Wach Trav Lamber
Die Plates 214	Gate Valves 102-108 Edson's Recording and Alarm Gauges 118 Eighth Bends for Cast-Iron Pipe 511 Ejectors, Carfield Pipe 511 Ejectors, Carfield Pipe 612 Electors Carfield Pipe 612 Electors Carfield Pipe 71 Extra Heavy 43 Cast-Iron 28 Extra Heavy 43 Cast-Iron 56 Extra Heavy 43 Cast-Iron 56 Extra Heavy 51 Extra Heavy 53 With Base 42 Closet, Cast-Iron 56 Drainage, Cast-Iron 56 Drainage, Cast-Iron 54 for Sewer Pipe 77 Lawler Patent 531 Long Turn, Cast-Iron 32 Mallenble 52 Railing 66-65 Railing	Flange Unions Cast Iron
" Stocks, Oster 215	" Hoppers	Tytro House 90 49
Dies and Cut-off Blades, Oster 215	" Laundry Tube 418 498	Soil Fipe 310-519 Steel, Cast and Drop Forged 44 Wash Trny, Lawler 531 Flange Unions, Cast-Iron 50 Extra Heavy 38, 43 Flanged Closet Base Fire Extra Heavy 43 Flanged Closet Base Fire Fire 51
Detricks   236     Designs for Raillings   69     Designs for Raillings   69     Detroit Lubricators   127, 128     Diamond Vises   21     Diamond Vises   226     Diaphragm Trench Pumps   239     Die Plates   234     Stocks, Oter   234     Dies and Culcoff Blades, Oster   215     Dies and Culcoff Blades   247     Oster for Armstrone Place Muchines   233     Oster for Armstrone	Drinking Fountains - 412   Original Fountains - 412   Original Fountains - 418   Original Fountains - 418   Original Fountains - 418   Original Fountains - 418   Original Fountains - 427   Original Fountains - 428   Original Fountains	Flanged Closet Base Fittings   519   Flanged Fittings   519   Flanged Fittings   50-43   E. H   38-43   Flanges   Rlind   37, 42   Cast-Iron   36, 87   Cast-Iron   37, 42   Cast-Iron   38, 87   Ca
" for Armstrong Pipe Muchines 223	" Sinks	Elanged Fittings Cost Iron
" " Stocks 216	" Sinhon Jet Closets - 271 276	A minger a fittings, t-ust-from 30-43
" Jarecki Pipe Machines 284	" Slop Sinks	Flangee Blind 88-48
" Solid 214 216	Siphon Jet Closets - 271, 276 Slop Sinks - 453, 454 Urinals - 325 Wash Sinks - 418	Cast Ison
Differential Blocks Weston's 245	Wash Sinbo	Closet Research Cost Iron 56
Dimen and Wts of Standard Pine W I oo og	Washdown Clouds - 981	Closet, Brass and Cast-Iron 56
of I B Voices Jenkins Disc 01	Washdown Closets 281 Washout Closets 292	F1007
Disc Water Meters 20	Europa Patent Adjustable Pine Hangana 50	Extra Heavy 42
Discs. Ashestos 77	Water Lifts and Trangers on	aced and Diffied 87
" Jenkins 91	Excelsion Steam Pine Insulators	U Floor
Distributing Fittings 153	Water Lifts - 208 Excelsior Steam Pipe Insulators - 51 Valves, Extra Heavy, Brass - 75	1 Spun Nucleal District
" Stocks, Pump Rod 217 ' for Armstrong Pipe Muchines 233 ' Stocks 216 ' Jurcekl Pipe Machines 284 ' Solid 214, 216 ' Bifferential Blocks, Weston's 245 Dimen and Wts. of Standard Pipe, W. I. 22, 23 ' of I. B. Vaires, Jenkins Disc 91 Disc Water Meters 20 Discs, Asbestos 77 Jenkins 91 Doberty Self-closing Urland Cocks 229	Exhaust Head and Pipes 155	Floor 311  Extra Heavy 42  Faced and Drilled 37  Filor E H 36, 66, 68  Spun, Nickel Plated 310  Flatway Stops, Simplex 477
- Later of the Country of the Countr	mamoon regarding tibes 199	Finitivity Stops, Simplex 477

Piexible Ball Joints	PAGE	RAGE
Flexible Ball Joints 5, 63	Gnte Valves, Eddy, Quick Gpening, Br 102	Heads, Screw, Brass 311
Union Joints, Moran 63	" " Rack and Pinjou 198	Heater Cleaners, Amountic Feed 529
Float Air Valves 113	" Rack and Piniou 106	Heaters, Gas - · · · · · · · 166
Valves 101	Sectional Cut 105	Water and Steam - 142-147
Floor Drain and Trap	Spigot End, I B - 105	Instantaneous - 530, 531
ringes +	with Comp. Screw - 114	Hemp, Jute and Oakum Packings - 198
ti Polling 00	Color on I Bosto for Dellin	Honderer Roller Tube Expanders - 225
Plates 51 50	Cates and Posts for Railing	Henueboenie's Automatic Pressure Reg - 97
" Sinha Marble Closet	Course Cooks	Homes Water Notes Tressure Valves - 96
" Stands for Valves 114	" Columns Water	Heveron Nipples Mullaubla 81
Flower Vases · · · · · 252	Glasses	Hinge Views - 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Flue Brushes and Cleaners 228, 229	" Siphons, Steam	Hinges for Doors
Flush and Supply Pipes, Closet 310	Gauges, Altitude 119	Pipe Getex 60
"Flush" Instantaneous Water Heaters - 530 "Rim Hoppers, Earthenware - 306	Recording and Alarm 118, 120	Hog Wash Valves 156
" Rim Hoppers, Earthenware - 306	" Steam or Vucuum 119, 120	Homestead Balanced Plug Valves 76
Flusb Valves 101	" Thorpe 165	Hook Plates, Cast Iron 49
Foot Baths, Porcelain Lined 357	Urn 181	Expansion 49
Rail and Fittings, "Grimu 68	" Water · · · · 115	Hooks, Beam 49
Flusb Valves   101	Works 119	Chandelier, Malleable - · · - G1
Forbas Pine Threading Muchines	" Casolina European Motors 205	Gas 49
Force Cups	Garman Silver Poutry Sinks 448	Ding Sell
Forges, Buffulo - 229	Glass Body Oil Pumps	Robe
Fountain Heads 185	" Eogine Oilers Powell's 134	" S
" Jets 188	" Gauge Tubes	Hopper Closets
Fountains, Drinking - · · - 391, 395	" Oil Cups - · · · · 129-134	Automatic - 273 283
1ron 252, 412	Rack and Pinion   104	" Deep Seal, Siphon · 267, 270
Four-Way Tees, Malleuble 59	Gleason's Stocks and Dies. Brass Pipe - 218	" Frost Proof 285, 286
Forbes Pipe Threading Machines   292	Globe Valves, Brass 72	Roynl Porcelaio - 273, 274
Prest Cose for Eddy Hadrones 307	Globe Valves, Brass - 72 Asbestos Disc, Brass - 77 Loon Body 93	Cocks 508, 509
Valves, Honestend 76 French Closet Bowls 307 Frost Case for Eddy Hydranis 14 Frost-proof Closet 5 598 Fuller Balls 5,08 Fuller Balls 6,09 Basin Cocks 498-501 Bath Cocks 501,302 Bibbs 493-497 Pantry Cocks 449 Urinal Cocks 327 Work 433-502 " Parts 502 Firmaces, Gasoline 230, 231 Melting 12,240 Fusible Plugs and Low Water Alsrms 118	Fytes Heavy Boys 25	Heads, Screw, Brass   148     Heater Cleaners, Antonntic Feed   5.99     Heaters, Gas   166     Water and Steam   142-147     Instantancous   5.90, 531     Henp, Jute and Oakum Packings   198     Headers, Roller Tube Expanders   225     Henueboehle's Automatic Pressure Ray   96     Hersey Water Melers   20     Hearson Wipples, Malleable   61     Hinge Vises   215     Hinges for Doors   318     Hinges for Doors   318     Hinges for Doors   318     Hometead Balanced Plug Valves   776     Hometead Balanced Plug Valves   776     Hook Plates, Cast Iron   49     Hooks, Beam   Expansion   49     Chandeller, Malleable   61     Gas   49     Lag Serew   53     Pipe, Soil   51     Robe   314, 474     S   311     Hopper Closets   298-297     Frost Proof   225, 286     Royal Porcelaio   273, 274     Cocks   508, 509     Seats and Legs   309     Illoppers, and Hoppers and Traps   306, 307     Car   307     Car   307
Hopper Valves 508	Extra Heavy Brass - 75 Iron Body - 92	Traps - 306, 307
Fuller Balls 502	" " Flanged Bross	" Enameled Iron Bowls - 200 207
" Basin Cocks 498-501	" Iron Body 88-90	" Slop · · · 449, 452
" Batb Cocks 501, 502	Jenkius Disc, Brass 74	Horizontal Boilers 526-528
B1008 493-497	Iron Body - 91	Check Valves, Brass 72
" United Cooks 499	" with Lock Shield, Brass - 73	E. H., Brass - 75
" Work	" Holders	Flanged Brass 73
" Parts 502	" Safety Valves Iron Body 90	1100 111
Furnaces, Gasotine · · · - 230, 231	Holders - 162 Safety Valves, Iron Body 90 Ventilators - 155 Gong Bells - 136	" " J.D. Iron . 91
" Melting ' 240, 241	Gong Bells	" Iron Body · · · 89
Fusible Plugs and Low Water Alarms - 118		Ilose 190-192
GALM Mall Phylone Poles I in an	Good Plugs, Stoppers and Gaskets	Bibb Ends 185
Carden Hose Vulves Rense	Gorana Parana Con	Bibbs, Boston Self-closing - 505
Garfield Ejectors and Injectors 196	Graduated Drainage Fittings 519	Compression 485-491
Gnrlock Packings 196	Grates, Brass 469-471	" Ground Plant - 483
Gus Brackets 161, 162	" for Curbs 10	" Loose Key, Compression 491
" Burner Cleaners 165	Grease and Steam Separators 150	" Busbiogs 185
Burners 158-168	Cups 131-134	Caps 183
" Drip Royee	Crassbougs Pine Filter and Value 212 212	Clamps and Menders 184, 185
"Fitters' l'ement	Duning Puning 212, 215	Couplings 185
" Fixture Fittings 158-168	Green River Screw Plates	" Ninnles 183-194
" Hooks 49	Ground Plug Bibbs 484	" Pipes and Nozzles
GALV. Mall. Fittings. Price List         65           Garden Hose Vulves. Brass         79           Garfield Ejectors and Injectors         128           Garfield Ejectors and Injectors         106           Gurlock Packings         101           Gurlock Packings         106           Humer Cleaners         165           Birmers         188-188           Cocks, Brass         88, 27           Drip Boxes         5, 13           Fitter's Cement         251           Fixture Fittings         188-188           Hooks         49           Lamps and Lamp Posts         5           Ligbters         166	Greenhouse Pipe, Frys and Valves   212, 213	" Reducers 183 185
'Lighters 166	Stops	" Reels 193, 194
Meter Cocks Brass 87	Gumbo Cement 251	"Straps and Fasteners 184
Lighters   166     Meter Cocks Brass   87     Pipe, Cast-Iron   2     Pilers   2923     Propriet Purpos and Bensim   2023	Gutter Curbs, Pans and Grates 10	Valves, Brass 79
" Proving Pumps and Repairs 207	HACK Sawa	Hot Water Radiator Valves
" Service Cooks 86 87	Hair Felt	Begulators
" Stove Cocks, Roundway 87	Half Circle Sinks 448	Hub End Gate Valves, Iron Body - 105 110
Stoves, Monitor 166, 167	" S Traps, Lead 520, 521	Hubs, Soil Pipe 516
Gaseline Furnees and Trans-	S " Soil Pipe - · · - 517, 518	Cocks
Cate Volves - 100 119	Hall Branches, Soil Pipe	Cesspools 450
" American, Brass 109	Ham Curing Pumps	Cooks
" Service - 109	Hammers and Sledges 227	Cesspools 459 Clamps, Keys and Sockets 189 Cocks - 481 Nozzles and Fountain Heads 185
Hub Ends · · · 110	Hancock Ejectors of Jet Pumps 124	
1 Fd.lv Proces - 109, 110	Inspirators 124	Street Washers and Parts 17-19 Hydraulic Gate Valves - 107, 113 or Hydrostatic Gauges - 119
Brouze 102, 106	Hand Cynnder Oil Pumps 132	Hydraulic Gate Valves 107, 113
** ** Extra Heavy 108	Handles Fancy	or Hydrostatic Gauges 119
" " Geared 106	for Pouring Pots	
" " Hose, Brass 102	Hangers, Boiler 528	Rams, Improved 204 Valves 107, 113
" " Hub Ends 105	Pipe, Adjustable 50	
Proving Pumps and Repairs   207	** Eureka 50	DEAL Grease Cups, Lunkenheimer 131
" Indicator, I B 104	Expansion and Parts of - 50	Hydrants and Parts - 18, 19 Junior Water Boilers - 144
" " Indicator, 1 B 104 " " Iron Body 103-108 " " O. S. and Y., I. B 104	Gutter Curbs, Pans and Grates	Trans Water Boilers 144
2. 3. 3. 3. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.		" Traps 457

	PAGE	PAGE
Ideal 11 astes 400, 400	Lard Tank Cocks, Brass   156	Malleable Unions       -       -       64         Maltese Water Heaters       -       146         Manhole Covers and Curhs       -       9         Manifolds or Branch Tees       -       48
Illuminated Steam Gauges 120	Latches for Stop and Waste Cocks 508	Maltese Water Heaters 146
Ideal Wastes     -     455, 456       Illuminated Steam Gauges     -     120       Improved Ball Cocks     -     -     482       Brass Floor Plates     -     52	Laundry Tubs 414-428	Manhole Covers and Curbs 9
" Brass Floor Plates 52	Lava Tips 163	Manifolds or Branch Tees 48
Stenm Traps, Patent 149	Lavatories, Earthenware 391	Mantles for Welsbach Lights 168
Brass Floor Plates 52 Stenm Traps, Patent 149 Increasers for Cast-Iron Pipe 3 Sewer Pipe 7 Soil Pipe 514, 515 Indicator Bolts for Door 313 Posts, Valve 114 Valves, Iron Body, Eddy 114	" Enameled Iron 401-411	Manifolds or Branch Tees         48           Mantles for Welsbach Lights         168           Manville Pipe Coverings         148           Marble         -         395-898           " Drinking Fountains         395           " Floor Slabs, Closet         311           Lavatories         374-394           " Urinal Stalls         315-318           Marsh Automatic Air Valves         81           " Back-Water Valves         88           " Back-Water Valves         625
" Sewer Pipe 7	" Marble 374-391	Marble 396-898
" Soil Pipe 514, 515	" Royal Porcelain 392	" Drinking Fountains 395
Indicator Bolts for Door 313	" Slate 393	" Floor Slabs, Closet 811
" Posts, Valve 114	Layatory Trimmings 456-460	" Layntories 874-391
" Valves Iron Body, Eddy 104	Lawler Automatic Expansion Tanks 151	" Urinal Stalls 315-818
Valves, Iron Body, Eddy 104 Indirect Radiation, Steam and Hot Water 139	" Water Feeders 151	Marsh Automatic Air Valves 81
Injectors, Garfield 126	Lavatory Trinimings         456-469           Lawler Automatic Expansion Tanks         151           Water Feeders         151           Hot Water Regulators         151           Wash Tray Fittings         531           Lawn Sprinklers         186-189           Lead and Jute Required for Calking         2           Bends         522           Drum Traps         523           Ferrules         523           Ferrules         523	" Drain Pine Valves 83
" Objo 126	" Wash Tray Fittings 581	Back-Water Valves 525 Steam Gauges, Illuminated - 120 Marsb-Paul Drain Pipe Air Valves 83
" Oil Boiler 133	Lawn Sprinklers 186-189	" Steam Gauges Illuminated 120
" Penberthy 125	Lead and Jute Required for Calking 2	Marsh-Paul Drain Pine Air Valves - 2 83
Inspirators, Hancock 124	" Bends 592	Match Holders - 464 Mats, Sink - 482 "McCann" Sewer Traps - 582 McClellan Trap Vents - 524
Instantaneous Water Henters 530 531	" Drum Trans 523	Mats Sink 482
Insulators Steam Pine 51	Ferrules 523 Goose Necks 171 Grease Traps 519	"McCann" Sewer Trans 539
Inverted V Branches Soil Pine 518	" Goose Necks 171	McClellan Trab Vents 594
Iron Regine 411	" Greese Trans 519	McNamara Hydrants and Street Washers 17
" Batha Porcalnin Lined 999-959		Molting Furnace - 940 941
Iron Pody Expansion Joints 05	" Connections Clare's Potent 159	Mondary Hose 184 195
U U Coto Volves 109 110	" Two no. 500 500	Margury Can got
U U Volves 105-110	Loothon Rolling 105	Metal Caskets and Manhalas . 107
" Valves, Iron Body, Eddy 104 Indirect Radiation, Steam and Hot Water 139 Injectors, Garfield 126 " Obio 126 " Oil, Boiler 133 " Peubertby 125 Inspirators, Hancock 124 Instantaneous Water Heaters 530, 531 Insulators, Steam Pipe 51 Inverted Y Branches, Soil Pipe 513 Inverted Y Branches, Soil Pipe 513 Iron Basins 411 " Baths, Porcelnin Lined 332-339 Iron Body Expansion Joints 95 " Gate Valves 103-110 " Valves 88-100 " Valves 88-100 " Extra Heavy 92 " Brackets 400 " Extra Heavy 92 " Brackets 400 " " Extra Heavy 92 " " Siphon Jet Closetts 271, 276 " Cocks 93, 94 " Enameled Closet Bowls 297 " " Siphon Jet Closetts 271, 276 " " Washdown Closetts 271, 276 " " Washdown Closetts 271, 276 " " Washdown Closetts 414 " Pipe Connections, Sink 446, 447 " " Hadiators 446, 447 " " Radiators 140 " Sewer Traps 525 Urinals 925  JACK Chains 467	ripe and riga and Steet Lead 0  "Connections, Clow's Patent 172  Traps 590-523  Leather Belting 195  Left-Hand End Slabs 396, 397  Legs, Brass Lavatory 459  for Stells 313, 314	McNamar Hydrants and Street Washers   McNamara Hydrants and Street Washers   McNamara Hydrants and Street Washers   McIling Furnaces   240, 211   McIling Furnaces   240, 211   McIling Furnaces   240, 211   McIling Furnaces   240, 211   McIling Furnaces   241   McIling Furnaces   241   McIling Furnaces   242   McIling Furnaces   243   McIling American   244   McIling American   245   McIling
U Prophete 400	Lett-Hand End Slabs	Motor Dover
tt Desgin Toules	Legs, Drass Lavatory	tt Cooks Con Dross
H Cooks	Long Handle Oil Come	U Promus on I Conoro Inon
tt Francisch Class Parrie	Lever Handle Oil Cups 150	11 Strain and Cimples
Enginered Closet Bowls 297	Stops 4:0-404	Metamo Paul
Sipoul Jet Closets 211, 210	Limestone Sewer or Catch Dasin Covers 10	bieters, 1 est 103
Washdown Closets 281	107 Stalls	Mine Chadas at Ass Cas
Ferrules with Trap Screw 475	List of Standard Sizes C. 1, Fittings 555, 534	Mica spades, etc., for Gas 107
Lavatories 401-411	Little Ginat Water Heaters 146  Loafer Ralls 67  Lock Cocks 180	Michigan Glass Off Cups 129
Pipe Connections, Sink 440, 447	Loater Rais	Grease Cups 133
Radiators 140	Lock Cocks 180	Lubricators 129
Sewer Traps	" bleter Cocks 87	Mill Pails 13/
Urinais	Service Cocks 8/	biller's Ratchet Die Plates 214
LANK OLI . 400	Smeid Valves, Brass 15, 81	Mineral West
JACK CDains 407	" Union Meter Cocks 87	Mineral Wool 148
Jack Screws, Bell Bottom - · · · 245	Lockbut Alppies, Wrought Iron 4/	Mirrors 403
Jacket Kettles, Stehm 241	Threads 4/	Modern Coppor Bollers 528
Jarecki Pipe Machines 234	Locknuts, Brass 1	Monair Tuning 168
Jenkias Disc Brass Valves 74	Cast-Iron 29	Monitor Con Conserved Description 100
ron Body valves 91	Manepole 61	Month Gas Stoves and Burners - 100, 107
radiator valves 51, 52	Lockseam Pipe and Fittings 155	Moral Flexible Union Joints 03
Discs 91	Lock Cocks         180           "Meter Cocks         87           "Service Cocks         87           "Shield Valves, Brass         73, 8f           "Union Meter Cocks         87           Locknut Nipples, Wrought Iros         47           "Threads         47           Locknuts, Brass         71           "Cast-Iron         29           "Malleable         61           Lockeéam Pipe and Fittings         153           Locomotive Crank Pin Oilers         133	Mosely Water Heaters 530
" Discs 91  Jet Closets 254-298	Lockseam Pipe and Fittings 155 Locomotive Crank Pin Oilers 133 Long Rends, Soil Pipe 510, 511	Mosely Water Heaters 530 Mueller Corporation Cocks 169
" Discs 91  Jet Closets 254-298 " Pumps 124-127	Lockseam Pipe and Fittings 155 Locomotive Crank Pin Oilers 138 Long Rends, Soil Pipe 510, 511 "Increasers 515	Mosely Water Heaters 530 Mueller Corporation Cocks 169 Pattern Tapping Machines - 237
" Discs - 91  Jet Closets - 254-298 " Pumps - 194-127  Jets, Fountain - 188	Lockseam Pipe and Fittings - 155   Locomotive Crank Pin Oilers - 133   Long Rends, Soil Pipe - 510, 511   Locad Bends - 515   Lead Bends - 522   Lockseam Pipe and Fittings - 1515   Locad Bends - 522   Lockseam Pipe and Fittings - 1515   Lockseam Pipe and Fittings - 1515   Lockseam Pipe and Fittings - 153   Lockseam Pipe and Fit	Mosely Water Heaters
" Discs - 91  Jet Closets - 254-298 " Pumps - 134-127  Jets, Fountain - 188  Jewel Cups - 466	Lockseam Pipe and Fittings - 150   Lockmottive Crank Pin Oilers - 138   Long Bends, Soil Pipe - 510, 511   Increasers - 515   Lead Bends - 522   Serews - 47	Mosely Water Heaters - 530 Mueller Corporation Cocks - 169 Pattern Tapping Mucbines - 237 Parts 238 Pressure Regulators - 98
Discs   91     Jet Closets   254-298     'Pumps   134-127     Jets, Fountain   188     Jewel Cups   466     'Furnaces and Parts   231	Long Bends, Soil Pipe - 510, 511 "Increasers - 515 " Lead Bends - 522 " Screws - 47 " Turn Fittings, C. I. 32-41	Mosely Water Heaters - 530 Mueller Corporation Cocks - 169 Pattern Tapping Mucbines - 237 Parts 238 Pressure Regulators - 98
Discs   93, 32     Jet Closets   234-288     Pumps   134-127     Jets, Fountain   188     Jewel Cups   460     Furnaces and Parts   231     Jewel Woter Filters   154	Long Bends, Soil Pipe - 510, 511 "Increasers - 515 " Lead Bends - 522 " Screws - 47 " Turn Fittings, C. I. 32-41	Mosely Water Heaters - 530 Mueller Corporation Cocks - 169 Pattern Tapping Mucbines - 237 Parts 238 Pressure Regulators - 98
Discs   91     Jet Closets   254-298     'Pumps   134-127     Jets Fountain   188     Jewel Cups   466     'Furnaces and Parts   231     Jewel Water Filters   134     Johnson Hopper Cocks   598	Long Bends, Soil Pipe - 510, 511 "Increasers - 515 " Lead Bends - 522 " Screws - 47 " Turn Fittings, C. I. 32-41	Mosely Water Heaters - 530 Mueller Corporation Cocks - 169 Pattern Tapping Mucbines - 237 Parts 238 Pressure Regulators - 98
Discs   93, 32	Long Bends, Soil Pipe - 510, 511 "Increasers - 515 " Lead Bends - 522 " Screws - 47 " Turn Fittings, C. I. 32-41	Mosely Water Heaters - 530 Mueller Corporation Cocks - 169 Pattern Tapping Mucbines - 237 Parts 238 Pressure Regulators - 98
Discs   91     Jet Closets   254-298     Pumps   124-127     Jets, Fountain   188     Jewel Cups   466     Furnaccs and Parts   231     Jewel Work Filters   154     Johnson Hopper Cocks   508     Joints, Flexible Ball   5, 63     Moran Flexible Union   68	Long Bends, Soil Pipe - 510, 511 "Increasers - 515 " Lead Bends - 522 " Screws - 47 " Turn Fittings, C. I. 32-41	Mosely Water Heaters - 530 Mueller Corporation Cocks - 169 Pattern Tapping Mucbines - 237 Parts 238 Pressure Regulators - 98
Jack Chains	Long Bends, Soil Pipe - 510, 511 "Increasers - 515 " Lead Bends - 522 " Screws - 47 " Turn Fittings, C. I. 32-41	Mosely Water Heaters
Discs   91	Long Bends, Soil Pipe - 510, 511 "Increasers - 515 " Lead Bends - 522 " Screws - 47 " Turn Fittings, C. I. 32-41	Mosely Water Heaters
Junior Water Boilers, Ideal 144	Long Bends, Soil Pipe - 510, 511 "Increasers - 515 " Lead Bends - 522 " Screws - 47 " Turn Fittings, C. I. 32-41	Mosely Water Heaters
Junior Water Boilers, Ideal 144  Lute and Lead recoursed for Calking - 2	Long Bends, Soil Pipe - 510, 511 "Increasers - 515 " Lead Bends - 522 " Screws - 47 " Turn Fittings, C. I. 32-41	Mosely Water Heaters
Junior Water Boilers, Ideal 144  Lute and Lead recoursed for Calking - 2	Long Bends, Soil Pipe - 510, 511 "Increasers - 515 " Lead Bends - 522 " Screws - 47 " Turn Fittings, C. I. 32-41	Mosely Water Heaters
Junior Water Boilers, Ideal 144	Long Bends, Soil Pipe         519, 511           "Increasers         515           "Lead Bends         522           "Screws         47           "Turn Fittings, C. I         32-41           Loops, Chandeiler, Malleahle         61           Loops, Chandeiler, Malleahle         99, 491           Low Pressure Damper Regulutors         152           Safety Valves, Brass         78           "Water Alarms         118           Lowlender Alarms         128           Lubricators, Detroit         127, 128           Lunkenhefmer         139           "Michigau         129           Plain         129           Plain         129           Lunkenhefmer         130           "Michigau by Michigau         129           "Lunkenhefmer blowsoft Valves         23	Mosely Water Heaters
Journals, Skeleton Oil Cups for - 180           Junior Water Boilers, Ideal - 144           Jute and Lead required for Calking - 2           "Hemp and Oakum Packings - 198           "Juvenile" Closets, Automatic - 278	Long Bends, Soil Pipe         519, 511           "Increasers         515           "Lead Bends         522           "Screws         47           "Turn Fittings, C. I         32-41           Loops, Chandeiler, Malleahle         61           Loops, Chandeiler, Malleahle         99, 491           Low Pressure Damper Regulutors         152           Safety Valves, Brass         78           "Water Alarms         118           Lowlender Alarms         128           Lubricators, Detroit         127, 128           Lunkenhefmer         139           "Michigau         129           Plain         129           Plain         129           Lunkenhefmer         130           "Michigau by Michigau         129           "Lunkenhefmer blowsoft Valves         23	Mosely Water Heaters
Journals, Skeleton Oil Cups for   180     Junior Water Boilers, Idea  - 144     Jute and Lead required for Calking   2     "Hemp and Oakum Packings - 198     "Juvenile" Closets, Automatie - 278     KEROSENE Cocks   181	Long Bends, Soil Pipe         519, 511           "Increasers         515           "Lead Bends         522           "Screws         47           "Turn Fittings, C. I         32-41           Loops, Chandeiler, Malleahle         61           Low Pressure Damper Regulutors         152           "Safety Valves, Brass         78           "Water Alarms         18           Lowicators, Detroit         127, 128           Lubricators, Detroit         127, 133           Michigan         139           "Plain         127           Lunkenbeimer Blow-off Valves         53           "Glass Body Oil Punns         138	Mosely Water Heaters
Journals, Skeleton Oil Cups for   180     Junior Water Boilers, Idea  - 144     Jute and Lead required for Calking   2     "Hemp and Oakum Packings - 198     "Juvenile" Closets, Automatie - 278     KEROSENE Cocks   181	Long Bends, Soil Pipe         519, 511           "Increasers         515           "Lead Bends         522           "Screws         47           "Turn Fittings, C. I         32-41           Loops, Chandeiler, Malleahle         61           Low Pressure Damper Regulutors         152           "Safety Valves, Brass         78           "Water Alarms         18           Lowicators, Detroit         127, 128           Lubricators, Detroit         127, 133           Michigan         139           "Plain         127           Lunkenbeimer Blow-off Valves         53           "Glass Body Oil Punns         138	Mosely Water Heaters
Journals, Skeleton Oil Cups for 190 Junior Water Boilers, Ideal 144 Jute and Lead required for Calking 2 "Hemp and Oakum Packings 198 "Juvenile" Closets, Automatie - 278  KEROSENE Cocks 191 Kettles 241 Keys for Lock Sbield Valves 81	Long Bends, Soil Pipe         519, 511           "Increasers         515           "Lead Bends         522           "Screws         47           "Turn Fittings, C. I         32-41           Loops, Chandeiler, Malleahle         61           Loops, Chandeiler, Malleahle         61           Low Pressure Damper Regulutors         152           "Safety Valves, Brass         78           "Water Alarms         118           Lowlel Ratchet Wrenches         228           Lubricators, Detroit         127, 128           "Unkenhefmer         133           "Wiebignu         129           "Plain         127           Lunkenheimer Blow-oft Valves         73           Glass Body Oil Punps         133           Grease Cups         129, 131           "Grease Cups         129, 131           "Siebt Peed Lubricutus         133	Mosely Water Heaters - 530 Mueller Corporation Cocks - 169 Pattern Tapping Mucbines - 237 Parts 238 Pressure Regulators - 98
Journals, Skeleton Oil Cups for 190 Junior Water Boilers, Ideal 144 Jute and Lead required for Calking 2 "Hemp and Oakum Packings 198 "Juvenile" Closets, Automatie - 278  KEROSENE Cocks 191 Kettles 241 Keys for Lock Sbield Valves 81	Long Bends, Soil Pipe         519, 511           "Increasers         515           "Lead Bends         522           "Screws         47           "Turn Fittings, C. I         32-41           Loops, Chandeiler, Malleahle         61           Loops, Chandeiler, Malleahle         61           Low Pressure Damper Regulutors         152           "Safety Valves, Brass         78           "Water Alarms         118           Lowlel Ratchet Wrenches         228           Lubricators, Detroit         127, 128           "Unkenhefmer         133           "Wiebignu         129           "Plain         127           Lunkenheimer Blow-oft Valves         73           Glass Body Oil Punps         133           Grease Cups         129, 131           "Grease Cups         129, 131           "Siebt Peed Lubricutus         133	Mosely Water Heaters   336     Mueller Corporation Cocks   169     Pattern Tapping Machines   237     Pattern Tapping Machines   288     Pressure Regulators   98     NAME Plates   288     Nason Steam Traps, Improved   149     Needle Flame Torches   2326     Shower Baths   360-372     New Era Steel Sinks   446     Hose   11     Hexagou, Malleahle   61     Hose   185     Lockput, Wrought Iron   47     Soldering   50     Wrought Gmbhaation   422     Nonparell Ratched Wreaches   222     Nuts, Machine Bolt   87
Journals, Skeleton Oil Cups for 190 Junior Water Boilers, Ideal 144 Jute and Lead required for Calking 2 "Hemp and Oakum Packings 198 "Juvenile" Closets, Automatie - 278  KEROSENE Cocks 191 Kettles 241 Keys for Lock Sbield Valves 81	Long Bends, Soil Pipe         519, 511           "Increasers         515           "Lead Bends         522           "Screws         47           "Turn Fittings, C. I         32-41           Loops, Chandeiler, Malleahle         61           Loops, Chandeiler, Malleahle         61           Low Pressure Damper Regulutors         152           "Safety Valves, Brass         78           "Water Alarms         118           Lowlel Ratchet Wrenches         228           Lubricators, Detroit         127, 128           "Unkenhefmer         133           "Wiebignu         129           "Plain         127           Lunkenheimer Blow-oft Valves         73           Glass Body Oil Punps         133           Grease Cups         129, 131           "Grease Cups         129, 131           "Siebt Peed Lubricutus         133	Mosely Water Heaters   336     Mueller Corporation Cocks   169     Pattern Tapping Machines   237     Pattern Tapping Machines   288     Pressure Regulators   98     NAME Plates   288     Nason Steam Traps, Improved   149     Needle Flame Torches   2326     Shower Baths   360-372     New Era Steel Sinks   446     Hose   11     Hexagou, Malleahle   61     Hose   185     Lockput, Wrought Iron   47     Soldering   50     Wrought Gmbhaation   422     Nonparell Ratched Wreaches   222     Nuts, Machine Bolt   87
Journals, Skeleton Oil Cups for 190 Junior Water Boilers, Ideal 144 Jute and Lead required for Calking 2 "Hemp and Oakum Packings 198 "Juvenile" Closets, Automatie - 278  KEROSENE Cocks 191 Kettles 241 Keys for Lock Sbield Valves 81	Long Bends, Soil Pipe         519, 511           "Increasers         515           "Lead Bends         522           "Screws         47           "Turn Fittings, C. I         32-41           Loops, Chandelier, Malleahle         61           Loops, Chandelier, Malleahle         90, 491           Low Pressure Damper Regulators         152           "Safety Valves, Brass         78           Low Water Alarms         18           Lowicators, Detroit         127, 128           Lubricators, Detroit         127, 138           Michigan         133           "Michigan         127           Lunchehiemer Blow-off Valves         53           "Grass Guy Oil Pumps         138           "Grass Cups         131           "Oil Cups         129, 131	Mosely Water Heaters   336     Mueller Corporation Cocks   169     Pattern Tapping Machines   237     Pattern Tapping Machines   288     Pressure Regulators   98     NAME Plates   288     Nason Steam Traps, Improved   149     Needle Flame Torches   2326     Shower Baths   360-372     New Era Steel Sinks   446     Hose   11     Hexagou, Malleahle   61     Hose   185     Lockput, Wrought Iron   47     Soldering   50     Wrought Gmbhaation   422     Nonparell Ratched Wreaches   222     Nuts, Machine Bolt   87
Journals, Skeleton Oil Cups for 190 Junior Water Boilers, Ideal 144 Jute and Lead required for Calking 2 "Hemp and Oakum Packings 198 "Juvenile" Closets, Automatie - 278  KEROSENE Cocks 191 Kettles 241 Keys for Lock Sbield Valves 81	Long Bendis, Soil Pipe         510, 511           "Increasers         515           "Lead Bendis         522           "Screws         47           "Turn Fittings, C. I.         32-41           Loops, Chandelier, Malleahle         61           Loops, Chandelier, Malleahle         61           Low Pressure Damper Regulators         152           "Safety Valves, Brass         78           "Water Alarms         118           Lowicators, Detroit         128           Lubricators, Detroit         127           Lubricators, Detroit         127           Lunkenheimer         133           Michigau         122           Lunkenheimer Blow-off Valves         122           Lunkenheimer Blow-off Valves         123           Grease Cups         13           "Grease Cups         18           "Sight Feed Lubricators         133           "Throttle Valves         78           Lyman Exbaust Head and Pipes         155	Mosely Water Heaters   336     Mueller Corporation Cocks   169     Pattern Tapping Machines   237     Pattern Tapping Machines   288     Pressure Regulators   98     NAME Plates   288     Nason Steam Traps, Improved   149     Needle Flame Torches   2326     Shower Baths   360-372     New Era Steel Sinks   446     Hose   11     Hexagou, Malleahle   61     Hose   185     Lockput, Wrought Iron   47     Soldering   50     Wrought Gmbhaation   422     Nonparell Ratched Wreaches   222     Nuts, Machine Bolt   87
Journals, Skeleton Oil Cups for 190 Junior Water Boilers, Ideal 144 Jute and Lead required for Calking 2 "Hemp and Oakum Packings 198 "Juvenile" Closets, Automatie - 278  KEROSENE Cocks 191 Kettles 241 Keys for Lock Sbield Valves 81	Long Bendis, Soil Pipe         510, 511           "Increasers         515           "Lead Bendis         522           "Screws         47           "Turn Fittings, C. I.         32-41           Loops, Chandelier, Malleahle         61           Loops, Chandelier, Malleahle         61           Low Pressure Damper Regulators         152           "Safety Valves, Brass         78           "Water Alarms         118           Lowicators, Detroit         128           Lubricators, Detroit         127           Lubricators, Detroit         127           Lunkenheimer         133           Michigau         122           Lunkenheimer Blow-off Valves         122           Lunkenheimer Blow-off Valves         123           Grease Cups         13           "Grease Cups         18           "Sight Feed Lubricators         133           "Throttle Valves         78           Lyman Exbaust Head and Pipes         155	Mosely Water Heaters   336     Mueller Corporation Cocks   169     Pattern Tapping Machines   237     Pattern Tapping Machines   288     Pressure Regulators   98     NAME Plates   288     Nason Steam Traps, Improved   149     Needle Flame Torches   2326     Shower Baths   360-372     New Era Steel Sinks   446     Hose   11     Hexagou, Malleahle   61     Hose   185     Lockput, Wrought Iron   47     Soldering   50     Wrought Gmbhaation   422     Nonparell Ratched Wreaches   222     Nuts, Machine Bolt   87
Journals, Skeleton Oil Cups for 190 Junior Water Boilers, Ideal 144 Jute and Lead required for Calking 2 "Hemp and Oakum Packings 198 "Juvenile" Closets, Automatie - 278  KEROSENE Cocks 191 Kettles 241 Keys for Lock Sbield Valves 81	Long Bendis, Soil Pipe         510, 511           "Increasers         515           "Lead Bendis         522           "Screws         47           "Turn Fittings, C. I.         32-41           Loops, Chandelier, Malleahle         61           Loops, Chandelier, Malleahle         61           Low Pressure Damper Regulators         152           "Safety Valves, Brass         78           "Water Alarms         118           Lowicators, Detroit         128           Lubricators, Detroit         127           Lubricators, Detroit         127           Lunkenheimer         133           Michigau         122           Lunkenheimer Blow-off Valves         122           Lunkenheimer Blow-off Valves         123           Grease Cups         13           "Grease Cups         18           "Sight Feed Lubricators         133           "Throttle Valves         78           Lyman Exbaust Head and Pipes         155	Mosely Water Heaters   336     Mueller Corporation Cocks   169     Pattern Tapping Machines   237     Pattern Tapping Machines   288     Pressure Regulators   98     NAME Plates   288     Nason Steam Traps, Improved   149     Needle Flame Torches   2326     Shower Baths   360-372     New Era Steel Sinks   446     Hose   11     Hexagou, Malleahle   61     Hose   185     Lockput, Wrought Iron   47     Soldering   50     Wrought Gmbhaation   422     Nonparell Ratched Wreaches   222     Nuts, Machine Bolt   87
Journals, Skeleton Oil Cups for 190 Junior Water Boilers, Ideal 144 Jute and Lead required for Calking 2 "Hemp and Oakum Packings 198 "Juvenile" Closets, Automatie - 278  KEROSENE Cocks 191 Kettles 241 Keys for Lock Sbield Valves 81	Long Bendis, Soil Pipe         510, 511           "Increasers         515           "Lead Bendis         522           "Screws         47           "Turn Fittings, C. I.         32-41           Loops, Chandelier, Malleahle         61           Loops, Chandelier, Malleahle         61           Low Pressure Damper Regulators         152           "Safety Valves, Brass         78           "Water Alarms         118           Lowicators, Detroit         128           Lubricators, Detroit         127           Lubricators, Detroit         127           Lunkenheimer         133           Michigau         122           Lunkenheimer Blow-off Valves         122           Lunkenheimer Blow-off Valves         123           Grease Cups         13           "Grease Cups         18           "Sight Feed Lubricators         133           "Throttle Valves         78           Lyman Exbaust Head and Pipes         155	Mosely Water Heaters   336     Mueller Corporation Cocks   169     Pattern Tapping Machines   237     Pattern Tapping Machines   288     Pressure Regulators   98     NAME Plates   288     Nason Steam Traps, Improved   149     Needle Flame Torches   2326     Shower Baths   360-372     New Era Steel Sinks   446     Hose   11     Hexagou, Malleahle   61     Hose   185     Lockput, Wrought Iron   47     Soldering   50     Wrought Gmbhaation   422     Nonparell Ratched Wreaches   222     Nuts, Machine Bolt   87
Journals, Skeleton Oil Cups for 190 Junior Water Boilers, Ideal 144 Jute and Lead required for Calking 2 "Hemp and Oakum Packings 198 "Juvenile" Closets, Automatie - 278  KEROSENE Cocks 191 Kettles 241 Keys for Lock Sbield Valves 81	Long Bendis, Soil Pipe         510, 511           "Increasers         515           "Lead Bendis         522           "Screws         47           "Turn Fittings, C. I.         32-41           Loops, Chandelier, Malleahle         61           Loops, Chandelier, Malleahle         61           Low Pressure Damper Regulators         152           "Safety Valves, Brass         78           "Water Alarms         118           Lowicators, Detroit         128           Lubricators, Detroit         127           Lubricators, Detroit         127           Lunkenheimer         133           Michigau         122           Lunkenheimer Blow-off Valves         122           Lunkenheimer Blow-off Valves         123           Grease Cups         13           "Grease Cups         18           "Sight Feed Lubricators         133           "Throttle Valves         78           Lyman Exbaust Head and Pipes         155	Mosely Water Heaters   336     Mueller Corporation Cocks   169     Pattern Tapping Machines   237     Pattern Tapping Machines   288     Pressure Regulators   98     NAME Plates   288     Nason Steam Traps, Improved   149     Needle Flame Torches   2326     Shower Baths   360-372     New Era Steel Sinks   446     Hose   11     Hexagou, Malleahle   61     Hose   185     Lockput, Wrought Iron   47     Soldering   50     Wrought Gmbhaation   422     Nonparell Ratched Wreaches   222     Nuts, Machine Bolt   87
Journals, Skeleton Oil Cups for 190 Junior Water Boilers, Ideal 144 Jute and Lead required for Calking 2 Hemp and Oakum Packings 198 "Juvenile" Closets, Automatie 278  KEROSENE Cocks 181 Keys for Lock Sbield Valves 81 Krttles 241 Keys for Lock Sbield Valves 81 Kydrant and Street Washer 189 Keystone Unions 64 Kitchen Sinks, Cast-Iron 427-447 Krehen Sinks, Cast-Iron 429-433 "Porcelain 429-433 "Noll Klim 427-440 "Steel 444-440 "Virginia" Stone 424-439 "Yorkshire 426, 431 Kllngfast Plpe Vises 225	Long Bendis, Soil Pipe         510, 511           "Increasers         515           "Lead Bendis         522           "Screws         47           "Turn Fittings, C. I.         32-41           Loops, Chandelier, Malleahle         61           Loops, Chandelier, Malleahle         61           Low Pressure Damper Regulators         152           "Safety Valves, Brass         78           "Water Alarms         118           Lowicators, Detroit         128           Lubricators, Detroit         127           Lubricators, Detroit         127           Lunkenheimer         133           Michigau         122           Lunkenheimer Blow-off Valves         122           Lunkenheimer Blow-off Valves         123           Grease Cups         13           "Grease Cups         18           "Sight Feed Lubricators         133           "Throttle Valves         78           Lyman Exbaust Head and Pipes         155	Mosely Water Heaters   336     Mueller Corporation Cocks   169     Pattern Tapping Machines   237     Pattern Tapping Machines   288     Pressure Regulators   98     NAME Plates   288     Nason Steam Traps, Improved   149     Needle Flame Torches   2326     Shower Baths   360-372     New Era Steel Sinks   446     Hose   11     Hexagou, Malleahle   61     Hose   185     Lockput, Wrought Iron   47     Soldering   50     Wrought Gmbhaation   422     Nonparell Ratched Wreaches   222     Nuts, Machine Bolt   87
Journals, Skeleton Oil Cups for 190 Junior Water Boilers, Ideal 144 Jute and Lead required for Calking 2 Hemp and Oakum Packings 198 "Juvenile" Closets, Automatie 278  KEROSENE Cocks 181 Keys for Lock Sbield Valves 81 Krttles 241 Keys for Lock Sbield Valves 81 Kydrant and Street Washer 189 Keystone Unions 64 Kitchen Sinks, Cast-Iron 427-447 Krehen Sinks, Cast-Iron 429-433 "Porcelain 429-433 "Noll Klim 427-440 "Steel 444-440 "Virginia" Stone 424-439 "Yorkshire 426, 431 Kllngfast Plpe Vises 225	Long Bendis, Soil Pipe         510, 511           "Increasers         515           "Lead Bendis         522           "Screws         47           "Turn Fittings, C. I.         32-41           Loops, Chandelier, Malleahle         61           Loops, Chandelier, Malleahle         61           Low Pressure Damper Regulators         152           "Safety Valves, Brass         78           "Water Alarms         118           Lowicators, Detroit         128           Lubricators, Detroit         127           Lubricators, Detroit         127           Lunkenheimer         133           Michigau         122           Lunkenheimer Blow-off Valves         122           Lunkenheimer Blow-off Valves         123           Grease Cups         13           "Grease Cups         18           "Sight Feed Lubricators         133           "Throttle Valves         78           Lyman Exbaust Head and Pipes         155	Mosely Water Heaters   336     Mueller Corporation Cocks   169     Pattern Tapping Machines   237     Pattern Tapping Machines   288     Pressure Regulators   98     NAME Plates   288     Nason Steam Traps, Improved   149     Needle Flame Torches   2326     Shower Baths   360-372     New Era Steel Sinks   446     Hose   11     Hexagou, Malleahle   61     Hose   185     Lockput, Wrought Iron   47     Soldering   50     Wrought Gmbhaation   422     Nonparell Ratched Wreaches   222     Nuts, Machine Bolt   87
Journals, Skeleton Oil Cups for 190 Junior Water Boilers, Ideal 144 Jute and Lead required for Calking 2 Hemp and Oakum Packings 198 "Juvenile" Closets, Automatie 278  KEROSENE Cocks 181 Keys for Lock Sbield Valves 81 Krttles 241 Keys for Lock Sbield Valves 81 Kydrant and Street Washer 189 Keystone Unions 64 Kitchen Sinks, Cast-Iron 427-447 Krehen Sinks, Cast-Iron 429-433 "Porcelain 429-433 "Noll Klim 427-440 "Steel 444-440 "Virginia" Stone 424-439 "Yorkshire 426, 431 Kllngfast Plpe Vises 225	Long Bendis, Soil Pipe         510, 511           "Increasers         515           "Lead Bendis         522           "Screws         47           "Turn Fittings, C. I.         32-41           Loops, Chandelier, Malleahle         61           Loops, Chandelier, Malleahle         61           Low Pressure Damper Regulators         152           "Safety Valves, Brass         78           "Water Alarms         118           Lowicators, Detroit         128           Lubricators, Detroit         127           Lubricators, Detroit         127           Lunkenheimer         133           Michigau         122           Lunkenheimer Blow-off Valves         122           Lunkenheimer Blow-off Valves         123           Grease Cups         13           "Grease Cups         18           "Sight Feed Lubricators         133           "Throttle Valves         78           Lyman Exbaust Head and Pipes         155	Mosely Water Heaters   336     Mueller Corporation Cocks   169     Pattern Tapping Machines   237     Pattern Tapping Machines   288     Pressure Regulators   98     NAME Plates   288     Nason Steam Traps, Improved   149     Needle Flame Torches   2326     Shower Baths   360-372     New Era Steel Sinks   446     Hose   11     Hexagou, Malleahle   61     Hose   185     Lockput, Wrought Iron   47     Soldering   50     Wrought Gmbhaation   422     Nonparell Ratched Wreaches   222     Nuts, Machine Bolt   87
Journals, Skeleton Oil Cups for 190 Junior Water Boilers, Ideal 144 Jute and Lead required for Calking 2 Hemp and Oakum Packings 198 "Juvenile" Closets, Automatie 278  KEROSENE Cocks 181 Keys for Lock Sbield Valves 81 Krttles 241 Keys for Lock Sbield Valves 81 Kydrant and Street Washer 189 Keystone Unions 64 Kitchen Sinks, Cast-Iron 427-447 Krehen Sinks, Cast-Iron 429-433 "Porcelain 429-433 "Noll Klim 427-440 "Steel 444-440 "Virginia" Stone 424-439 "Yorkshire 426, 431 Kllngfast Plpe Vises 225	Long Bendis, Soil Pipe         510, 511           "Increasers         515           "Lead Bendis         522           "Screws         47           "Turn Fittings, C. I.         32-41           Loops, Chandelier, Malleahle         61           Loops, Chandelier, Malleahle         61           Low Pressure Damper Regulators         152           "Safety Valves, Brass         78           "Water Alarms         118           Lowicators, Detroit         128           Lubricators, Detroit         127           Lubricators, Detroit         127           Lunkenheimer         133           Michigau         122           Lunkenheimer Blow-off Valves         122           Lunkenheimer Blow-off Valves         123           Grease Cups         13           "Grease Cups         18           "Sight Feed Lubricators         133           "Throttle Valves         78           Lyman Exbaust Head and Pipes         155	Mosely Water Heaters   336     Mueller Corporation Cocks   169     Pattern Tapping Machines   237     Pattern Tapping Machines   288     Pressure Regulators   98     NAME Plates   288     Nason Steam Traps, Improved   149     Needle Flame Torches   2326     Shower Baths   360-372     New Era Steel Sinks   446     Hose   11     Hexagou, Malleahle   61     Hose   185     Lockput, Wrought Iron   47     Soldering   50     Wrought Gmbhaation   422     Nonparell Ratched Wreaches   222     Nuts, Machine Bolt   87
Journals, Skeleton Oil Cups for 190 Junior Water Boilers, Ideal 144 Jute and Lead required for Calking 2 Hemp and Oakum Packings 198 "Juvenile" Closets, Automatie 278  KEROSENE Cocks 181 Keys for Lock Sbield Valves 81 Krttles 241 Keys for Lock Sbield Valves 81 Kydrant and Street Washer 189 Keystone Unions 64 Kitchen Sinks, Cast-Iron 427-447 Krehen Sinks, Cast-Iron 429-433 "Porcelain 429-433 "Noll Klim 427-440 "Steel 444-440 "Virginia" Stone 424-439 "Yorkshire 426, 431 Kllngfast Plpe Vises 225	Long Bendis, Soil Pipe         510, 511           "Increasers         515           "Lead Bendis         522           "Screws         47           "Turn Fittings, C. I.         32-41           Loops, Chandelier, Malleahle         61           Loops, Chandelier, Malleahle         61           Low Pressure Damper Regulators         152           "Safety Valves, Brass         78           "Water Alarms         118           Lowicators, Detroit         128           Lubricators, Detroit         127           Lubricators, Detroit         127           Lunkenheimer         133           Michigau         122           Lunkenheimer Blow-off Valves         122           Lunkenheimer Blow-off Valves         123           Grease Cups         13           "Grease Cups         18           "Sight Feed Lubricators         133           "Throttle Valves         78           Lyman Exbaust Head and Pipes         155	Mosely Water Heaters   336     Mueller Corporation Cocks   169     Pattern Tapping Machines   237     Pattern Tapping Machines   288     Pressure Regulators   98     NAME Plates   288     Nason Steam Traps, Improved   149     Needle Flame Torches   2326     Shower Baths   360-372     New Era Steel Sinks   446     Hose   11     Hexagou, Malleahle   61     Hose   185     Lockput, Wrought Iron   47     Soldering   50     Wrought Gmbhaation   422     Nonparell Ratched Wreaches   222     Nuts, Machine Bolt   87
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Journals, Skeleton Oil Cups for   190	Long Bends, Soil Pipe   510, 511     "Increasers   515     "Lead Bends   522     "Screws   47     "Turn Fittings, C. I   32-41     Loops, Chandelier, Malleahle   61     Loops, Chandelier, Malleahle   152     "Safety Valves, Brass   78     "Water Alarms   118     Lowell Ratchet Wrenches   223     "Lunkenheimer   133     "Michigau   127     Lunkenheimer   133     "Michigau   127     Lunkenheimer   134     "Michigau   127     Lunkenheimer   127     Lunkenheimer   127     "Lunkenheimer   128     "Michigau   129     Lunkenheimer   129     Lunkenheimer   120     "Michigau   129     "Michigau   129     "Michigau   129     "Michigau   129     "Michigau   129     "Michigau   138     "Thottle Valves   78     Lyman Exbaust Head and Pipes   15     "Machines, Pipe Threading   232-235     "Tapping   237-230     "Madden's Patent Closets   254-208     "Madden's Patent Closets   254-208     "Malleable Hinge Vises   225     "Hoo Fittings   38-64     "Classification   65	Mosely Water Heaters   336     Mueller Corporation Cocks   169     Pattern Tapping Machines   237     Pattern Tapping Machines   288     Pressure Regulators   98     NAME Plates   288     Nason Steam Traps, Improved   149     Needle Flame Torches   2326     Shower Baths   360-372     New Era Steel Sinks   446     Hose   11     Hexagou, Malleahle   61     Hose   185     Lockput, Wrought Iron   47     Soldering   50     Wrought Gmbhaation   422     Nonparell Ratched Wreaches   222     Nuts, Machine Bolt   87
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PAGE	HOAS	PA
Oilers, Engine, Powell's Glass 134	Pipe, Soil         From Property           Spiral, Riveted         25           Steel         22, 23           Straps, Nickel Plated         310           Tapping Machines         232           Tapping Machines         232           Taps         232           Tips         47           Tin and Block Tin         6           Togs         221           Vises         224, 225           Wrought Irou         22, 23           Pitcher Spout Pumps         26           Plain Bibbs, Boston Self-closing         505           "Broughton Self-closing         503	Pumps, Ham Curing 19 House Force 202, 20
Open Lavatories 874-893	Spiral Riveted	" House Force 209 90
Opposite Angle Redictor Values	II Stale	
Oliers, Engtin, Powell's Glass 134 Open Lavatories 1374–893 Opposite Angle Radiator Valves 80 Opposite Angle Radiator Valves 256 Ornaments, Railing 66 Os Distributing Fittings 153 Oster Die Stocks and Parts 215 Our Special" Tapping Machines 289 Oval Pantry Sinks 404, 448 Overflow and Waste Conucctions 455 Hole Covers 456	tt Strong Michael Distail 910	Hydraulic Pressure or Test   24-1
Ornamental Siphon Jet Closets 256	Straps, Mickel Plated 310	Jet 124~12
Ornaments, Railing 66	Tapping Machines 239	" Oil 132, I
O. S Distributing Fittings 153	"Tnps 223	" Rotary and Double Acting 20
Oster Die Stocks and Parts 215	" Threading Machines 939-935	" Test - 206 20
COur Special! Tanning Machines	" Throads 47	U Trongle Dionkerson
Our Special Tapping Machines 258	I Breads	rencii, Diaphragm
Oval Pantry Sinks 440, 448	Tin and Block Tin 6	Putty 25
Overflow and Waste Connections - 455, 456	" Tongs 221	
" Hole Covers 456	" Vises 224 225	QUARTER Bends for Cast-Iron Pipe -
	" Wronehon	II II Call Dina #1
P TRAPS, for Sewer Pipe   8   20   521   520   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521   521	Washington 100 00	Soil Pipe 51
TRAPS, for sewer ripe	Wrought frou 22, 23	Wrought from 6
Lead 520, 521	Pitcher Spout Pumps 203	Quick Opening Gate Valves, Eddy, Brass 10
" Nickel Plated Brass 457	Plain Bibbs, Boston Self-closing 505	Quick Opening Gate Valves, Eddy, Brass 10
" Soil Pipe 517, 518	Broughton Self-closing 503 Compression 485-491 Doherty Self-closing 507 Fuller 493-497 Ground Plug 483	" Radiator Valves 8
Packings all kinds 196-198	" " Compression 485 401	radiator farics C
Dalla Vill	Compression 400-401	DAGE INC. III DII
Thits, Ailli 107	Dollerty Self-closing 507	RACK and Pinion Valves, Eddy 10
Palmer Valves 525	Fuller 493-497	Racking Cocks 18
Pnns, Closet 532	" " Ground Plug 483	Racks, Hose, Swinging 19
Pantry Cocks, Boston Self-closing 506	" Loose New Compression - 491	"Towel - 46
" Compression 409	" " Tolograph Salf closing 50ft	ti ti tan Dailana Ba
II II Dobusto Salf alasina 507	1 County of the	Tor noners
Donerry Sert-closing 307	Couplings 472	Radiator Air Valves 83, 8
Pantry Cocks, Boston Self-closing 506 Compression 492 Doherty Self-closing 507 Fuller 499	Oil Cups 130	Racking Cocks -   Racks, Hose, Swinging   18   Racks, Hose, Swinging   19   Towel   -4   Racks, Hose, Swinging   -4   Racks, Hose   -4   Racks, Hose   -4   Racks, Linon   -5   Radiator Air Valves   -8   Racks, Linon   -5   Radiator Air Valves   -5   Radiator Air
	" Stops 484	" Tops, Marble 39
" Royal Porcelaju 432 434	Plates, Ceiling 51 59	" Valves Ashestos Disc
" Royal Porcelaiu 432, 434 " Steel 440	" Floor - 51 59	II Dropp Dieg
White Metal or Copper 425	11 (Tools	Brass Disc 8
White Metal or Copper   435   Pargon Index Lever Lubricators   145   Pargon Index Lever Lubricators   138   Parvel Trays   463   Parker Ratchets   228   Vises   224   The Expansion Pipe Hangers   50   Hancock Inspirators   124   Hydrants and Street Washers 17, 19   Mucller Water Tanping Mach   238	Ground Plug	Corner 8
Paper Holders 465	Pliers 222	Angle 8
Paragon Index Lever Lubricators 133	Plugs, Brass 71	Jenkins Disc
Parcel Trave 483	" Cast Iron . 90	
Paulson Potebata 900	ti Cast-110h 1 C til Or	
Parker Datchets	Extra Heavy and Sond 35	Quick Opening 5
V ises 224	" tor Cast-Iron Pipe 4	with Lock Shickl - 8
Parts for Bower Traps 524	" Fusible 118	Radiators, Steam and Hot Water - 139 14
" Expansion Pipe Hangers 50	" Sink 440 447	Radiators, Steam and Hot Water - 189, 14 Railing Fittings 66-6 Railroad Oilers 137, 13
" " Hancock Inspirators 124	" Soil Pine	Dailroad Allow
11 14 Medeanta and Street Washers 17 10	41 C-11.1	Ranroad Offers - 137, 13
Hydrants and Street washers It, 19	Sond	Rain and Well Water Cocks 17
" Mueller Water Tapping Mach. 238	"Tapped, for Cast-Iron Pipe 3	Raised Strainers 470, 47
Patent Hydrant Clamps 189	" Test, Soil Pipe 516	Rams, Hydraulic 20
Patent Hydrant Clamps 189 Overflow Basins, Earthenware 399, 400	" with Stoppers 468-476	Range Rollers
Payne Corporation Cocks 170	Plumbers' and Miscellangous Tools 248 250	if Clouete One 20
Peace Combination Pliers	the Priend Pener Corp. 050	Closets 295-30
Dedected Weekens Observe Deserts	Friend Force Clips 250	Siphon Jet 29
Payne Corporation Cocks   170	with Stoppers 408-476 Plumbers and Miscellaneous Tools 248-250 Friend Force Cups 250 Furnaces and Repairs 230, 231 Soil 231 Plunger Closets 290 Points, Well 320, 231 Pop Safety and Water Relief Valves 135, 136 Porcelain Baths 30, 331	" Shower Baths 36
" Closets 287	" Soil 251	Ratchet Die Plates Miller's
Peerless Recording Gauges 120	Plunger Closets 296	" Stocks 915 91
Penberthy Injectors and Ejectors 125	Points Well a - a - 900 916	tt Duille 00
" Crank Pin Oilers - 129	Pop Sefets and Wases Police Value 405 400	Drins 22
Prefere Europeier Care Deler	Pop Salety and water Relief Valves 135, 136	Pipe Cutters, Reversible - · - 21
refreet Expansion case noits 58	Porcelain Baths 330, 331	" Wrenches 222, 22
Pertection Gate Cocks 150	" Drinking Fountains 394	Ratchets, Boiler and Friction 22
" Sash Ventilators 141	" Laundry Tubs 414 415	Resmers for Pine 919 99
Perforated Sheet Brass 210	" Lavotories 900	Popper Slabe Mouble
Petroleum Cocke	U Lined From Doth - DOO DEO	Recess biabs, marble
Philadelphia Unpress Parthonness 200	timed from Datils 502-509	Recessed Basins, Larthenware 40
r miadeiphia rinppers, Earthenware 300	Foot Butbs 357	" Couplings 4
Enameled Iron - 290	" Sitz Baths 357	" Flange Unions 4
Peerless Recording Gauges         120           Penberthy Injectors and Ejectors         125           "Crank Pin Oilers         133           Perfect Expansion Case Bolts         58           Perfect Expansion Case Bolts         58           Performance         150           "Sash Ventilators         141           Perforated Sheet Brass         210           Petroleum Cocks         158           Philadelphia Huppers, Earthenware         306           "Enameled Iron         290           Pickle Cocks         157           Pickle Meedles, Clow's         157           Picks         244           Pij Lead         6           Pillars for Gas         164           Pilley Flue Brush and Scraper         228	" Sinks 499-484	Recording and Alarm Gauges . 119 10
Pickling Needles, Clow's 157	" Slop Hoppers	Red Jacket Steam Flue Cleanure
Picks	" Sinks 452	Deducer Dress Press
Pig Load	Damahla Parka	neducers, Brass 7
Dillora for Co-	Portable Datas 355, 850, 859	" Cast-Iron 2
ringis for Gas 164	" Pop Safety Valves, Brass 135, 186	" Drainage, Cast-fron 5
rancy race Brush and Scraper 228	Post Indicator for Valves 114	for Cast-Iron Pine
Pioneer and Royal Oil Cups 131	" Plates 918	14 44 Sewer Dine
Pipe, Brass 71	Posts and Gates for Railings	tt Hose
" Cast-Iron	Pouring Pote	Hose 183, 18
ti Vi Flanged	Pouring rots 242	Malleable 6
ranged 2	Powell's Glass Engine Oilers 134	" Soil Pipe 51
Clamps 45	" Grease Cups 184	Reducing Valves 0
" Coverings 148	" Throttle Valves 100	Reels Hose
" Culverts, Cast Iron 1	Pressure Damper Regulators	Paranetan Caura Casha
" Cutters	tr or Vocanie Consus	regester dauge cocks 11
Pillars for Gas     164       Pilley Flue Brush and Scraper     228       Pioneer and Royal Oil Cups     181       Pipe, Brass     71       Cast-Iron     2       ***Clamps     45       Coverings     148       ***Culverts, Cast Iron     1       ***Cutters     218       ***Cutters     232-235       ***Drills     233       ***Greenhouse     212       ***Hangers, Adjustable     50       ***Eureka     50       ***Eynansion     50       ***Eynansion     50       ***Malleable, Galvanized     49	Pop Safety and Water Relief Valves 135, 136     Porcelain Baths	registers and ventilators 14
th Daille	necording Gauges - 118, 120	Regulators 151, 15
Driis	Regulators 97, 98	Reliable Grease Cups 13
Greenhouse 212	Price List and Classification Mall 05	Reliauce Safety Water Columns 11
" Hangers, Adjustable 50	"Princess" Baths 359	Relief and Pon Safety Valves . 195 10
" Eureka 50	Prosser's Spring Tube Expenders - 902	"Population and Cinhar Tet Classes
" Expansion 50	Pulle Closet	Dandaria To b Color Jet Closets 25
" Mallochle Calvenized 40	Power Cellinder	Rendering Tank Cocks 15
Halden Nielest Dieter	rump Cymuders 206	Repair Couplings, Closet 61
riolders, Mickel Plated 310	" Governors, Steam 99	Repairs, Stove 59
Hooks for Soil Pipe 516	" Rod Couplings, Malleable 211	Rests Pine
" Jointers 244	" Stocks and Dies	Return Road Radiatom Iron Dina
" Lead	Pumps	Return Deng Radiators, fron Pipe 14
" Lock Seam	41 Air Took	Bends, Brass 7
11 Padiators	Air Test 207	" Extra Heavy 4
14 The residence 140	Rod Couplings, Malleable   - 211   ''   Stocks and Dies   - 217   Pumps   - 199-207   Air Test   - 207   Basiu and Force   - 207	Cast-Iron
neamers 218, 223	" Cistern and Pitcher Spout 203	" " Malleable
" Rests 516	" Drip, Gas 206	" Rough Bross Fy Hann 4
Expansion 50 Malleable, Galvanized 49 Holders, Nickel Plated 310 Hooks for Soil Pipe 214 Jointers 244 Lead 6 Lock Seam 155 Radintors 140 Resmers 218, 223 Rests 5, 156 Sewer, and Fittings 7, 8	'' Cistern and Pitcher Spout 203 '' Drip, Gas 208 '' Greenhouse 208	Railing Fittings   660-8
,	отосиново 208	Diee! 4

	PAGE	PAG
Return Benda, Wrought from 62	Screws, Brass 311	Sledges and Hammers 22
Return Benda, Wrought Iron 62   Steam Traps 150   Kickett's Rubher Connectiona 312   Right and Left Couplings, Malleable - 60   Hand End Sheba - 396 397	Lag 53 Trap 473, 474	Sleeves for Cast-Iron Pipe
Rickett's Rubber Connections 312	Trap 473, 474	Sievees for Usar-Iron Pipe   Sievees Split, for Cast-Iron Pipe   51
Right and Left Couplings, Malleable - 60	Seamless Tubing, Brass and Copper 71	" Straight, Soil Pipe 51
" Hand End Slaba 396, 397	Seats and Tanks, Closet 308, 309	Slings, Rope, Endless 29
Hand End Slaba 396, 397   Ring Hooks, Expansion, and Parts - 50   Pipe, Sewer 8   Riveted Pipe, Spiral 25	Sectional Dies, Armstrong 216	Slip Joints
Pipe, Sewer 8	" Lavatories 401-405	Slop Hoppers 449, 45
Riveted Pipe, Spiral 25	Self-elosing Hopper Cocks 509	" Sinks 448-45
Roadway or Small Valve Boxes 12	" Urinal Cocka 329	Sluice Gates 11
Robb Couplings 312	" Work 503-507	Smith Ratchets 22
Wested Pipe, Spiral   25   12   12   12   12   13   14   15   15   15   15   15   15   15	" Broughton 503, 504	Smith Ratchets 22 " Water Heaters 14
Robe Hooks 314, 464	Self-Lighting Burners, Gas 166	Soap and Sponge Holders 462, 464, 46
"Rococo" Siphon Jet Closets 256	Sentinel Oil Cups 131	Scapstone, Price List of 39
Rod Rests and Hnudles 189	Separators, Steam and Grease 150	Soil Pipe and Fittings 510-51
Rollers, Towel 463	Service Boxes 11, 12	" Test Plugs 51
Roll-Rim Sink Bucks 445, 447	" Coeks Gas 86 87	" Plumbers' 25
Roof Connection, Drainage, Cast Iron - 57	" Gnte Valves Brass 100	Solder
" Plates 213	Sewer Covers 9 10	" Pote
" Soil Pipe 514	" Pine and Fittings 7 8	Soldering Irons
Root's Spiral Riveted Pine 23	" Royle	" Ninnles and Unions 47
Kope Mnnile 198	(1 Trans 449 595	" React Desinage
" Slings Endless 286	11 McCann 4 599	Combination 56
Rose Sprinklers 185	" Valvas - 595	Solid Plage
Potory Stop and Weste Latebas - 508	Shampes Cooks Fuller 500	USpecial Of Daths 949 94
Power Stone	Soampoo Cocks, Fuller	Tophe and Caste 900 90
Roll-Rim Sink Bucks	Shall Drilla Combination	Specials for Cost Iver Div.
0 0 Simples - 426 427	U. Soon Cune Morble	Spiget End Cate Valves Edda
Pound Clan Hannana 410	Soap Cups, Marote 308	Spigot End Gute Valves, Eddy 10
Poundry Cooks Free United 1	Short Increase Call Discontinuous 184	Spiral Liveted Fipe
Roundway Cocks, Extra Heavy, Iron 94 Gas Stove - 87 Iron Cocks - 94 Stops - 172-175, 476-479	Suort increasers, Son Pipe 514	Smith Ratches   40, 404
" Gas Stove 87	" Lead Bends 522	Split Sleeves for Cast-fron Pipe
Tron Cocks 94	Sbovels 246	" Tees for Cast-Iron Pipe
" Stops 172-175, 476-479	Shower Baths 360-372	Sponge Holders 46
Stops   172-175, 446-479   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   175   1	Cocks 484, 490, 401	Spring Compression Grease Cups 18
" Simplex 476, 477	" Rings 373	Sprinklers 185-18
Royal and Pioneer Oil Cups 131	Siamese Couplings 183	. " Shampoo 37
" Plunger Closets 206	Side Outlet Elhows, Cast-Iron 30	Spun Flanges, Nickel Plated 81
" Porcelain Baths 330, 331	" " Malleable 58	Square Basins 40
" Closets 272-274	" Tees, Cast-Iron 30	" Pantry Sinks 44
" Drinking Fountains 394	Sidewalk Catch Basin Curbs 10	" Sinks, Cast-Iron 44
" Laundry Tubs 414; 415	Sight Feed Lubricatora 127-133	" Slop Hoppers 44
" Lavatories 392	" Oil Cups 129-134	Stall Trimmings 81
" Sinks 429-484	Sill Cocks 179	Stamped Brsss Floor and Ceiling Plates 5
Porcelain Baths . 330, 381	Simplex Meter Strainers 21	Sponge Holders
Rubber Balls, Fuller 502	Stops 476, 477	"Standard" Asbestos Pipe Coveriugs 14
" Belting 195	Single Back Slabs 896, 397	Boiler Oil Injectors 18 Boilers 528-52 List of C. I. Fittings - 533, 53 Steam Traps 14
" Connections, Elbows, etc 312	" Gate Valves, Americau 113	" Boilers 526-52
** Packing 196-198	" Hubs 516	List of C. I. Fittings - 533, 53
" Stoppers 468-470	Sink Backs, Roll Rim 445, 447	" Steam Traps 14
" Tubing 192	" Bolts 447	" Wnter Relief Valves 13
' Vnlvcs 196	" Bracketa 400 461	Stands, Boiler 52
" Washers 197	" Mats 432	Floor, for Valves 11
Running Trans Drainage Cast-Iron 57	" Ports 445-447	Stanwood Pipe Cutters 21
Trapa, Dramage, Come from		
	" Plugs and Grates 468-470	Star Ventilators 15
tor Sewer Pipe 8	" Plugs and Grates 468-470 Sinks Cast-Iron 427-449	Star Ventilators 15 Starr Acetylene Burners 16
tor Sewer Pipe 8 Lead 520 Soil Pipe 518	" Plugs and Grates 468-470 Sinks, Cast-Iron 427-449 " Enameled Iron 427-447	Star Ventilators 15 Starr Acetylene Burners 16 Stationary Pop Safety Valves 135, 13
" tor Sewer Pipe 8 " Lead 520 " Soil Pipe 518 Bussell Ceiling and Floor Plutes 59	" Plugs and Grates 468-470 Sinks, Cast-fron 427-449 " Enameled Iron 427-447 " Pantry 432 434 495	Star Ventilators 15
Washers   Prinage   Cast fron   - 57	" Plugs and Grates - 488-470 Sinks, Cast-Iron - 427-449 " Enameled Iron - 427-447 " Pantry432, 434, 435 " Porcelain - 494-434	Star Ventilators
	" Plugs and Grates - 468-470 Sinks, Cast-iron - 427-449 " Enameled Iron - 427-447 " Pantry - 432, 434, 435 " Porcelain - 429-434 " Slate 424-439	Star Ventilators   15     Start Acetylene Burners   16     Stationary Pop Safety Valves   135, 15     '' Valve Boxes   1     Steam and Brewers' Hose   190, 18     '' Grease Separators   15
	" Plugs and Grates 468-470 Sinks, Cast-Iron 427-447 " Enameled Iron 427-447 " Pantry - 432, 484, 485 " Porcelain 429-434 " Slate 424-489 " Slop 448-451	Star Ventilators   15     Starr Acetylene Burners   16     Stationary Pop Safety Valves   135, 18     Valve Boxes   1     Steam and Brewers' Hose   190, 18     " Grease Separators   17     Boilers, Triumph   14
	" Plugs and Grates 488-470 Sinks, Cast-Iron 427-449 "Enameled Iron 427-447 " Pantry 432, 434, 485 " Porcelain 4324, 435 " Slate 424-439 " Slop 448-454 " Streel 444-446	Star Veotllators   15
	" Plugs and Grates 488-470 Sinks, Cast-fron 427-449 " Enameled Iron 427-447 " Pantry 432, 434, 435 " Porcelain 429-434 " Slate 424-439 " Slop 448-454 " Steel 444-446 " " "Virginia" Stone 424-439	Star Ventilators   15
	" Plugs and Grates 488-470 Sinks, Cast-Iron 427-449 Enameled Iron 427-447 " Pantry 432, 434, 485 " Porcelain 432, 434, 485 " Slate 424-439 " Slop 448-454 " 'Virginia' Stone 424-439 " Wash 118	Star Veotllators   15
	" Plugs and Grates 488-470 Sinks, Cast-fron 427-449 Enameled Iron 427-447 " Pantry 432, 434, 485 " Forcelain 424-439 " Slate 424-439 " Slop 448-454 " Virginia" Stone 424-439 " Wash 411 " "Yorkshire" 426, 431	Star Ventilators   18
	" Plugs and Grates 488-470 Sinks, Cast-Iron 427-449 Sinks, Cast-Iron 427-449 " Enameled Iron 427-447 " Pantry 432, 434, 485 " Porcelain 429-434 " Slate 424-439 " Slop 448-454 " "Virginia" Stone 424-439 " Wash 418 " "Yorkshire" 426, 431 Sinhon Homper Clastes 220, 290	Star Ventilators   18
	" Plugs and Grates 488-470 Sinks, Cast-Iron 427-449 " Enameled Iron 427-447 " Pantry 432, 434, 485 Porcelain 439-433 Slate 432-439 Slop 448-454 " Wirginia" Stone 434-439 " Wirginia" Stone 424-439 " " Pantry 439-439 " Stop 448-459 "	Star Ventilators   15
	" Plugs and Grates 488-470 Sinks, Cast-Iron 427-449 Sinks, Cast-Iron 427-449 Enameled Iron 427-447 " Pantry 432, 434, 455 " Porcelain 429-434 " Slate 424-439 " Slop 448-454 " "Virginia" Stone 424-439 " Wash 418 " "Yorkshire" 426, 431 Siphon Hopper Classets 270, 290 Jet Classet Bowls 9, 202 " (Classets) 9, 242, 490	Star Ventilators   18
	" Plugs and Grates 488-470 Sinks, Cast-Iron 427-449 " Enameled Iron 427-447 " Pantry 432, 434, 435 " Porcelain 429-438 " Slate 424-439 " Slop 448-459 " Steel 444-469 " Virginia" Stone 424-439 " Wash 430 " Wash 430 Siphon Hopper Closets 220, 200 " Jet Classet Bowls 244-299 " Closeta Automatic 221, 225, 226 " Closeta	Star Ventilators   15
	" Plugs and Grates 488-470 Sinks, Cast-Iron 427-449 Sinks, Cast-Iron 427-449 " Enameled Iron 427-447 " Pantry 432, 434, 455 " Porcelain 429-434 " Slate 424-439 " Slop 448-454 " "Virginia" Stone 424-439 " Wash 418 " "Yorkshire" 426, 431 Siphon Hopper Closets 270, 290 " Jet Cluset Bowls 20, 242-290 " Closets 270, 240 " Closets 271, 275, 276 " Enameled Iron 271, 275, 276	Star Ventilators   18
	" Plugs and Grates 488-470 Sinks, Cast-iron 427-449 " Enameled Iron 427-449 " Pantry 432, 434, 485 " Porcelain 439-433 " Slate 424-439 " Slop 448-459 " Steel 444-459 " Virginia" Stone 424-439 " Wash - 448 " "Yorkshire" 420, 431 Siphon Hopper Closets 270, 230 " Jet Cluset Bowls 21, 230 " Jet Cluset Bowls 21, 230 " Closeta Automatic 271, 275, 276 " Enameled Iron 271, 276 " Law Down Tank 286	Star Ventilators   15
	" Plugs and Grates	Star Ventilators   18
S HOOKS and Swivels	" Plugs and Grates	Star Ventilators   15
S HOOKS and Swivels	" Plugs and Grates	Steam Traps
S HOOKS and Swivels	"Plugs and Grates	Star Ventilators   18
S HOOKS and Swivels	" Plugs and Grates	Star Ventilators   18
S HOOKS and Swivels	Samless Tubing, Brass and Copper 71 Seats and Tanks, Closet 398, 398, 398 Sectional Dies, Armstrong 216 Lavatories 401-405 Self-closing Hopper Cokes 503, 504 Self-Lighting Burners, Gas 503, 504 Self-Lighting Burners, Gas 508, 504 Self-Lighting Burners, Gas 508, 504 Self-Lighting Burners, Gas 169, 504 Service Boxea 11, 182 Cocks, Gas 86, 87 Gnte Valves, Brass 100 Sewer Covers 9, 10 Sewer Covers 9, 10 Sewer Covers 9, 10 Sewer Covers 9, 10 Sept and Fittings 7, 8 Rods 251 Traps 449, 525 "McCann 532 "Valves 525 Sbampoo Cocks, Fuller 500 Sprinklers 373 Sbell Drills, Combination 223 Soap Cups, Marble 309 Sprinklers 373 Sbell Drills, Combination 239 Sherman Hose Clamps and Menders 184 Sbort Increasers, Soil Pipe 514 "Lead Bends 522 Shovels 246 Sbower Batbs 309, 372 "Cocks 484, 400, 401 "Rings 373 Siames Couplings 183 Side Outlet Elhows, Cast-Iron 30 Sight Feed Lubricatora 127-138 Silf Cocks 194 "Tres, Cast-Iron 30 Sight Feed Lubricatora 127-138 Silf Cocks 194 "Braskets 400, 461 Mats 432 "Parts 447 "Plugs and Grates 488-470 Sinks, Cast-Iron 474 "Plugs and Grates 488-470 Sinks Cast-Iron 427-447 "Plugs and Grates 488-470 "Sinks, Cast-Iron 427-449 "Sinks, Cast-Iron 427-449 "Sinks, Cast-Iron 427-447 "Plugs and Grates 488-470 "Sinks, Cast-Iron 427-449 "Sinks, Cast-Iron 427-449 "Sinks, Cast-Iron 427-447 "Plugs and Grates 488-470 "Sinks, Cast-Iron 427-449 "Sinks, Cast-Iron 427-447 "Plugs and Grates 488-470 "Sinks, Cast-Iron 427-449 "Sinks, Cast-Iron 427-447 "Plugs and Grates 488-470 "Sinks, Cast-Iron 427-449 "Sinks, Cast-Iron 427-447 "Plugs and	Star Ventilators   15
S HOOKS and Swivels   311   S Traps, Drainage, Cast-Iron   57   " for Sewer Fipe   8   " Read   520, 521   " Notel Plated, Brass   457   " Soil Fipe   517-519   Saddles, Malleable   517-519   Safe Waste Grates and Valves   470   Safe Waste Grates and Valves   470   Safe Waste Grates and Valves   78   " Unlow Pressure   78   " Iron Body   00   " Iron Body   00   " Iron Body   00   " One Grates   117   " Cusbion   117   " Cusbion   117   " Cusbion   529   Sanitary Crosses and Tees   512, 513   " Traps, Cast-Iron   510	" Plugs and Grates 488-470 Sinks, Cast-Iron 427-449 "Enameled Iron 427-449 " Pantry 432, 434, 455 Porcelain 429-434 " Slate 424-439 " Slop 448-454 " Virginia" Stone 424-439 " Wash 418 " Yorkshire" 426, 431 Siphon Hopper Closets 270, 290 " Jet Claset Bowls 902 " Closets 270, 290 " Automatic 271, 275, 276 " Low Down Tank 269 " Low Down Tank 269 " Hange 299 " Urimals 315 Siphons, Stean Gauge 121 Sizt Baths, Porcelain Lined 357 Sixteenth Bends for Cast-Iron Pipe 4 Soll Pipe 511	Star Ventilators   18
S HOOKS and Swivels   311   S Traps, Drainage, Cast-Iron   57   " for Sewer Fipe   8   " Read   520, 521   " Notel Plated, Brass   457   " Soil Fipe   517-519   Saddles, Malleable   517-519   Safe Waste Grates and Valves   470   Safe Waste Grates and Valves   470   Safe Waste Grates and Valves   78   " Unlow Pressure   78   " Iron Body   00   " Iron Body   00   " Iron Body   00   " One Grates   117   " Cusbion   117   " Cusbion   117   " Cusbion   529   Sanitary Crosses and Tees   512, 513   " Traps, Cast-Iron   510	"Plugs and Grates 488-470 Sinks, Cast-iron 427-449 "Enameled Iron 427-449 "Pantry 432, 434, 455 "Porcelain 429-433 "Slate 424-439 "Slate 424-439 "Slop 448-454 "Virginia" Stone 424-439 "Wasch 418 "Yorkshire" 428, 431 "Yorkshire" 428, 431 "Sphon llopper Closets 270, 240 "Jet Cinset Bowls 20, 240 "Losets 271, 275, 276 "Enameled Iron 271, 275, 276 "Enameled Iron 271, 275, 276 "Low Down Tank 488 "Urinals Automatic 271, 275, 276 "Urinals Automatic 335 "Urinals Automatic 335 "Urinals Automatic 335 "Sizhons, Stean Garge 315 Siphons, Stean Garge 355 Sixteenth Bends, Soil Pipe 511	Star Ventilators   15
S HOOKS and Swivels   311   S Traps, Drainage, Cast-Iron   57   " for Sewer Fipe   8   " Read   520, 521   " Notel Plated, Brass   457   " Soil Fipe   517-519   Saddles, Malleable   517-519   Safe Waste Grates and Valves   470   Safe Waste Grates and Valves   470   Safe Waste Grates and Valves   78   " Unlow Pressure   78   " Iron Body   00   " Iron Body   00   " Iron Body   00   " One Grates   117   " Cusbion   117   " Cusbion   117   " Cusbion   529   Sanitary Crosses and Tees   512, 513   " Traps, Cast-Iron   510	" Plugs and Grates 488-470 Sinks, Cast-Iron 427-449 "Enameled Iron 427-449 " Pantry 432, 434, 455 Porcelain 429-434 " Slate 424-439 " Slop 448-454 " Yirginia" Stone 424-439 " Wash 418 " Yorkshire" 426, 431 Siphon Hopper Closets 270, 290 " Jet Claset Bowls 302 " Closets 270, 290 " Automate 271, 275, 276 " Low Down Tank 269 " Low Down Tank 269 " Urimals 315 Siphons, Stean Gange 298 " Urimals 315 Siphons, Stean Gange 298 " Sixteenth Bends for Cast-Iron Pipe 4 " Soil Pipe 511 Sketeton Oil Cups for Journals 150 Sketeson Oil Cups for Journals 150	Star Ventilators
S HOOKS and Swivels   311   S Traps, Drainage, Cast-Iron   57   " for Sewer Fipe   8   " Read   520, 521   " Notel Plated, Brass   457   " Soil Fipe   517-519   Saddles, Malleable   517-519   Safe Waste Grates and Valves   470   Safe Waste Grates and Valves   470   Safe Waste Grates and Valves   78   " Unlow Pressure   78   " Iron Body   00   " Iron Body   00   " Iron Body   00   " One Grates   117   " Cusbion   117   " Cusbion   117   " Cusbion   529   Sanitary Crosses and Tees   512, 513   " Traps, Cast-Iron   510	" Plugs and Grates	Star Ventilators   15
S HOOKS and Swivels   311   S Traps, Drainage, Cast-Iron   57   " for Sewer Fipe   8   " Read   520, 521   " Notel Plated, Brass   457   " Soil Fipe   517-519   Saddles, Malleable   517-519   Safe Waste Grates and Valves   470   Safe Waste Grates and Valves   470   Safe Waste Grates and Valves   78   " Unlow Pressure   78   " Iron Body   00   " Iron Body   00   " Iron Body   00   " One Grates   117   " Cusbion   117   " Cusbion   117   " Cusbion   529   Sanitary Crosses and Tees   512, 513   " Traps, Cast-Iron   510	" Plugs and Grates	Funny Orients   149, 15   Swing Joints, Brass   149, 15   Return   11   Steel Barrows   24   Brackets   44   Clad Bath Tubs   35
S HOOKS and Swivels   311   S Traps, Drainage, Cast-Iron   57   " for Sewer Fipe   8   " Read   520, 521   " Notel Plated, Brass   457   " Soil Fipe   517-519   Saddles, Malleable   517-519   Safe Waste Grates and Valves   470   Safe Waste Grates and Valves   470   Safe Waste Grates and Valves   78   " Unlow Pressure   78   " Iron Body   00   " Iron Body   00   " Iron Body   00   " One Grates   117   " Cusbion   117   " Cusbion   117   " Cusbion   529   Sanitary Crosses and Tees   512, 513   " Traps, Cast-Iron   510	" Plugs and Grates	Funny Orients   149, 15   Swing Joints, Brass   149, 15   Return   11   Steel Barrows   24   Brackets   44   Clad Bath Tubs   35
S HOOKS and Swivels   311   S Traps, Drainage, Cast-Iron   57   " for Sewer Fipe   8   " Read   520, 521   " Notel Plated, Brass   457   " Soil Fipe   517-519   Saddles, Malleable   517-519   Safe Waste Grates and Valves   470   Safe Waste Grates and Valves   470   Safe Waste Grates and Valves   78   " Unlow Pressure   78   " Iron Body   00   " Iron Body   00   " Iron Body   00   " One Grates   117   " Cusbion   117   " Cusbion   117   " Cusbion   529   Sanitary Crosses and Tees   512, 513   " Traps, Cast-Iron   510	"Plugs and Grates	Funny Orients   149, 15   Swing Joints, Brass   149, 15   Return   11   Steel Barrows   24   Brackets   44   Clad Bath Tubs   35
S HOOKS and Swivels   311   S Traps, Drainage, Cast-Iron   57   " for Sewer Fipe   8   " Read   520, 521   " Notel Plated, Brass   457   " Soil Fipe   517-519   Saddles, Malleable   517-519   Safe Waste Grates and Valves   470   Safe Waste Grates and Valves   470   Safe Waste Grates and Valves   78   " Unlow Pressure   78   " Iron Body   00   " Iron Body   00   " Iron Body   00   " One Grates   117   " Cusbion   117   " Cusbion   117   " Cusbion   529   Sanitary Crosses and Tees   512, 513   " Traps, Cast-Iron   510	" Plugs and Grates	Funny Orients   149, 15   Swing Joints, Brass   149, 15   Return   11   Steel Barrows   24   Brackets   44   Clad Bath Tubs   35
S HOOKS and Swivels	"Plugs and Grates	Star Ventilators   15

Steel Scrapers	PAGE	PAGE
Steel Scrapers	Thermometers	UNDERWRITER Relief Valves   135   Union Elbows, Malleable   64
" Siuks 441-410	" Bath 464	Union Elbows, Mallcable · · · · - 64
" Tanks 146	Tbimbles, Soil Pipe 516	Joints, Flexible - · · · 63
" Toggle Bults 532	Thorp Gauges · · · · · · · 165	" Meter Cocks Gas 87
44 Tota Rayes 247	Threads, Locknut	Radiator Elhous
to Values 00	14 Standard for W. I Dina 42	Cana Commercian 400
Yaives	The second of The True True Too had	Stops, Compression 430
Wedges	Inree-quarter S Traps, Lead 520, 521	Tees, Malleable 64
Wire Tube Cleaners 229	Soil Pipe - 517, 518	Unions, Brass 70
Stillson Wrenches and Repairs 220	Three-way Cocks, Brass 85	" Drop Forged 43
Stocks and Dies 214-218	" Iron 94	Flanged 30
Stop and Waste Cocks, Clew Improved - 548	" Elbows, Drainage Cast-Iron 55	Evtra Heave 98 42
Stoppers Rabber and Metal 468-470	" Valves Homestead 76	Karsiana 64
Name Closet Door 212	Throttle Value Bress 78	Me) stolic
Stups, Closet Door	I miotele yalves, Diass 10	ntarieable
Compression 450-401	Tron Body   100	Soldering 472
" for Clow Connection 172	"Tiger" Grease Cups, Luukenheimer - 131	Upright Bath Bibbs 502
" " Supply Pipes 456	Tilting Tanks 326	Urinal and Closet Stall Trinuings 313, 314  "Clamps 314, 327  "Cocks 327, 329
" Loose Key, Compression - 490, 491	Tip Pipe, Block, and Block Tip 6	" Clomps 314 397
" Plain Ground Plug 484	Tinned Straps 19	" Cooks
14 Pough - a a a a a a 476-481	Tinners' Snins	Connections 207
16 21-21-2	Tine Cas	Connections 327 Tanks and Connectious 326
Simplex 410, 411	Tups, Gus 100	Tauks and Connectious 326
Store Cocks, Gas, Roundway	Toonsco water Heaters 144	Traps 327
" Repairs 532	Toggle Bolts 532	" Troughs 321-323
Straight Sleeves, Soil Pipe 516	Toilet Paper Holders 165	Urinals 315-325
Straightway Blow-off Valves, Bruss 78	Tongs 221	" Car 307
Valves, Homestead 76	Tool Bags 249	" Earthenware
Strainers Bar	Tools	Iron a goa
Straight way Binw-off Valves, Brass - 78 Valves, Honicstead - 76 Strainers, Bar - 449 Meter, Simplex - 21	Tips, Gas         163           Tobasco Water Heaters         144           Togle Bolts         532           Toilet Paper Holders         165           Tongs         221           Tool Bags         249           Tools         14-250           Plumbers and Miscellaneous         248-259           Water Works         493-217           Top Supply Ball Cocks         482           Torreat Water Meters         21           Torreat Water Meters         21           Towel Clips and Racks         482           Towel Clips and Racks         482	" Tanks and Connectious 326 " Traps 321-23 " Troughs 321-23 Urinals - 315-325 " Car 307 " Earthenware 324 " Iron 325 " Siphon Jet 315 " Urn Cecks and Gauges 181
Heter, Shiplex	Fiduriosis and Miscellaneous 249-250	Sipuon Jet 315
Raised, Convex and Fancy 470, 471	Water Works 236-217	Urn Cocks and Gauges 181
Raised, Convex and Fancy   470, 471     Sink	Tooth Brush Holders and Trays 462	Urn Cocks and Gauges 181 U. S. Auvils 226
" Suction Hose 183	Top Supply Ball Cocks 482	Useful Rules and Information 537-545
" Pipe 209	Torches, Alcohol and Gasoline 230	30, 31
Straps Pipe Nickel Plated 310	Torrent Water Meters 21	V BRANCHES for Sewer Pipe 8
" Tinned 49	Tote Boxes Steel	Vocume of Brosses Courses
Cannot Ellering Mallochia 50	Towal Cline and Dooles 100 100	Vacuum of Fressure Gauges 119
Street Fibows, Malicable	Tower Cups and Macks 462, 463	Valves, Brass 78
	Racks for Boilers 529	Valve, Auxiliary, Eddy Fire Hydrant - 14
Suction Hose Strainers 183	Trap and Drain, Floor 378	Boxes 12, 13
" Pipe Strainers 209	" Serews 473, 474	"Indicator Posts 114
Suction Hose Strainers         183           Pipe Strainers         209           Superior Rubber Elbows         312	" Vents, McClellan 524	Valves Air 113
Supply and Flush Pipes, Closet 310	Traps. Bath. Cudell 524	" for Water Pine 119
Pines Bath 455	" Bell Rress - 121	De Padintes
Supply and Flush Pipes, Closet - 310 Pipes, Bath - 455 Lavatory - 458	ti ti Iron	Nautator
Swing Joints, Steam, Brass	110g	\[ V BRANCHES for Sower Pipe - 8 \] \[ Vacuum or Pressure Gauges - 119 \] \[ Valves, Brass - 78 \] \[ Valves, Brass - 12, 13 \] \[ Valves, Millary, Eldy Fire Hydrant - 14 \] \[ Valves, Air - 114 \] \[ Valves, Air - 114 \] \[ Valves, Air - 118 \] \[ Valves, Air - 118 \] \[ Valves, Air - 119 \]
Swing Joints, Steam, Diass	nower	Single Gate 113
Swinging Check Valves, Brass 73	Drainage, Cast-Iron 57	Angle, Asbestos Disc, Brass 77
Iron Body 89	" Drum 523	Tron 93
Swivels 311	" for Sewer Pipe 8	Brass
	" Grease	Extra Heavy, Brass 75
TALLOW Pots Steel 137 138	" Lavatory etc	Element Description
Tourners and Crow Rere 949	' Lond	Flanged, Brass 78 Iron 88, 90 Jeukins Disc, Brass - 74
Tampers and Crow mars	Dead	Iron 88, 90
TRUK Dall Cocks 402	Sewer 449, 525	Jeukins Disc, Brass 74
Float valves 101	"McCann" 532	Iron 91
Tanka and Seats, Closet 308, 309	" Soil Pipe 517-519	Steel 92  with Lock Shield 73
" Brazing 527	'' Steam 149, 150	" with Lock Shield 73
" Expansion 151, 152	" Return 150	Ashestos Disc Brass 27
" Steel 146	" Urinal 827	Buck Pressure
TALLOW Pots, Steel         137, 138           Tampers and Crow Bars         242           Tauk Ball Cocks         482           * Float Valves         101           Tanka and Seats, Closet         308, 309           * Brazing         527           Expansion         151, 132           * Steel         146           * Urinal and Hopper         326           Taper Plugs for Cast-Iron Pipe         4           Tapping Machines and Parts         237-239	Trench Braces Extension 245	With Lock Shield   73
Taper Plugs for Cast-Iron Pine 4	Pumps Diaphrages - 090	Hater 525
Tanned Pluge for Cost Iron Pine	Trimmings Rath Tub	Blow-off or 1, Brass 73
Topping Machines and Punts	Classiand Heinel C. V. Change	Irou Body 100
Tapping Machines and Parts   237-239     Taps for Tapping Machines   238, 239     Drills and Reamers   - 231     Tar Melting Furnaces   - 241	Closet and Urinal Stall 313, 314	Brass 72-84
Taps for Tapping Machines 238, 239	Engine and Boiler - 115-188	" Asbestos Disc 77
Drills and Reamers 223	Lavatory 456-469	" Extra Heavy Excelsior 75
Tar Melting Furnaces 241	Railing 66-69	ti II II am at a d
		Homestead 76
Tee Branches for Sewer Pipe 7, 8	Trimo Pipe Cutters 218	" Homestead 76
Tee Branches for Sewer Pipe 7, 8	Trimo Pipe Cutters 218 Wrenches and Repairs - 220 229	" Homestead 76 " Bronze 107 " Butterfly Brass 29
Tee Branches for Sewer Pipe 7, 8  Soil Pipe 511, 512  Handle Stops 476-484	Trimo Pipe Cutters	Homestead 76     Bronze 107     Butterfly, Brass 78     Lyon
Tee Branches for Sewer Pipe 7, 8	Trimo Pipe Cutters	Homestead   76
Tee Branches for Sewer Pipe 7, 8 50il Pipe 50il 7ipe 11, 512 11andle Stops 476-481 Tees, Branch, Cast-Iron 48 18 Brass 50	Trimo Pipe Cutters	Bronze
Tee Branches for Sewer Pipe	Trimo Pipe Cutters   218   218   Wrenches and Repairs   220, 222   222   223   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224   224	Bronze
Tee Branches for Sewer Pipe 7, 8 Soil Pipe 511, 58 Handle Stops 476–181 Tees, Branch, Cast-fron 48 Brass 70 Extra Heavy 48	Trimo Pipe Chiters   218   Wrenches and Repairs   220, 222   Triumph Boilers   143   "Steam Generators   143   "Heaters   143   "Water Heaters   142   Tabe Clears   143   Tabe Clears   143   Tabe Clears   144   Tabe Clears   145   Tabe Clears	Bronze
Tee Branches for Sewer Pipe   7, 8   Soil Pipe   511, 512   Handle Stops   476-48   Tees, Branch, Cast-Iron   48   Brass   70   Extra Heavy   24, 34   Cast-Iron   27, 33, 34	Trimo Pipe Ciuters   218   239   229   239   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   2	Bronze
Tee Branches for Sewer Pipe         7, 8           Noil Pipe         511, 512           I Handle Stops         476-481           Tees, Branch, Cast-Iron         48           Brass         70           Extra Heavy         43           Cast-Iron         27, 33, 34           Drainage, Cast-Iron         56	Trimo Pipe Cruters   218   218   229   229   229   229   229   229   229   229   229   229   229   229   229   229   229   229   229   229   229   229   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   2	Bronze
Tee Branches for Sewer Pipe   7, 8   Soil Pipe   511, 512   Handle Stops   476-48   Tees, Branch, Cast-Iron   48   Brass   70   Extra Heavy   27, 33, 34   Drainage, Cast-Iron   50   Extra Heavy   38-41	Trimo Pipe Ciuters   218	Bronze   107
Tee Branches for Sewer Pipe   7, 8   Noil Pipe   511, 512   Handle Stops   476-481   Tees, Branch, Cast-fron   48   Brass   70   Extra Heavy   43   Cast-fron   27, 33, 34   Cast-fron   27, 33, 34   Drainage, Cast-fron   56   Extra Heavy   38-41   for Cast-fron Pipe   4	Torreat Nater Meters 21 Tores Daxes, Steel 247 Tores Daxes, Steel 247 Towel Clips and Backs 462, 463 " Racks for Boilers 529 Trap and Drain, Floor 373 " Serews 473, 474 " Vests, McClellan 524 Traps, Bath, Cndell 524 " Bell, Brass 471 " Iron 450 " Bown 75 " Drainage, Cast-Iron 57 " Clark 167 " Clark 167 " Clark 170 " Clark 17	Bronze   107
Tee Branches for Sewer Pipe   7, 8   Soil Pipe   511, 512   Handle Stops   476-48   Tees, Branch, Cast-Iron   48   Brass   70   Extra Heavy   476-48   Cast-Iron   27, 33, 34   Drainage, Cast-Iron   56   Extra Heavy   38-41   for Cast-Iron Pipe   4   Lawler Patent   531	Trimo Pipe Cutters   218	Bronze   107
Tee Branches for Sewer Pipe 7, 8 Soil Pipe 511, 512 Handle Stops 476-481 Tees, Branch, Cast-Iron 48 Brass 748 Cast-Iron 27, 33, 34 Cast-Iron 27, 33, 34 Crast-Iron 27, 38, 34 Crast-Iron 38-41 Gro Cast-Iron 56 Extra Heavy 38-41 for Cast-Iron 19pe 4 Lawler Patent 531 Long Turn, Cast-Iron 32, 35, 44	Glass Gauge 115	Bronze   107
Tee Branches for Sewer Pipe 7, 8 Soil Pipe 511, 512 Handle Stops 476-181 Tees, Branch, Cast-Iron 48 Brass 70 Extra Heavy 43, 34 Cast-Iron 27, 33, 34 Drainage, Cast-Iron 56 Extra Heavy 38-41 for Cast-Iron Pipe 4 Lawler Patent 531 Long Turn, Cast-Iron 92, 35, 34 Malleable 59, 64	Glass Gauge 115	Bronze   107
Tee Branches for Sewer Pipe 7, 8 Soil Pipe 511, 512 Handle Stops 476-481 Tees, Brunch, Cast-Iron 48 Brass 24 Extra Heavy 48 Cast-Iron 27, 33, 34 Cast-Iron 56 Extra Heavy 38-41 Lawler Patent 531 Long Turn, Cast-Iron 92, 35, 41 Malleable 59, 64 Malleable 66	Glass Gauge 115	Bronze   107
Tee Branches for Sewer Pipe 7, 8 Soil Pipe 511, 512 Handle Stops 476—181 Tees, Branch, Cast-fron 48 Brass 70 Extra Heavy 43 Cast-fron 27, 33, 34 Cast-fron 56 Extra Heavy 38—41 for Cast-fron Pipe 4 Lawler Patent 531 Long Turn, Cast-fron 52, 35, 41 Malleable 59, 64	Glass Gauge 115	Bronze   107
Tee Branches for Sewer Pipe 7, 8 9 "Soil Pipe 511, 512 Handle Stops 476—181 Tees, Brunch, Cast-Iron 48 Brass 24 "Extra Heavy 48 Cast-Iron -27, 83, 84 Drainage, Cast-Iron 56 Extra Heavy 38-41 for Cast-Iron Pipe 4 Lawler Patent 531 Long Turn Cast-Iron -92, 35, 44 Malleabe 59, 64 Extra Heavy 438 Extra Heavy 438 Railing 66-68	Glass Gauge 115	Bronze   107
Tee Branches for Sewer Pipe 7, 8 Soil Pipe 511, 512 Handle Stops 476—181 Tees, Branch, Cast-Iron 48 Brass 70 Extra Heavy 43 Cast-Iron 27, 33, 34 Cast-Iron 56 Extra Heavy 38—11 for Cast-Iron Pipe 4 Lawler Patent 531, Long Turn, Cast-Iron 52, 35, 41 Malleable 59, 64 Extra Heavy 43 Railing 66–68 Steel 44	Glass Gauge 115	Bronze   107
Tee Branches for Sewer Pipe 7, 8  "Soil Pipe 511, 512  "Handle Stops 476-481  Tees, Brunch, Cast-Iron 48  Brass - 48  "Extra Heavy 43  "Cast-Iron - 27, 83, 34  "Drainage, Cast-Iron - 36, 66  Extra Heavy 38-41  for Cast-Iron Pipe 4  Lawler Patent 531  Long Turn, Cast-Iron - 32, 35, 41  "Extra Heavy 43, 531  Long Turn, Cast-Iron - 59, 64  "Extra Heavy 43, 66-68  Railing 66-68  Railing 66-68  Steel - 44  Telegraph Uipher 533, 536	Glass Gauge 115	Bronze   107
Tee Branches for Sewer Pipe 7, 8 Soil Pipe 511, 512 Handle Stops 476-481 Tees, Branch, Cast-Iron 48 Brass 70 Extra Heavy 43 Cast-Iron 27, 33, 34 Crast-Iron 27, 33, 34 Crast-Iron 196 Extra Heavy 38-41 for Cast-Iron 196 Lawler Patent 531 Long Turn, Cast-Iron 52, 35, 41 Malleable 59, 64 Railing 66-68 Steel 44 Telegraph Cipher 531, 536 Self-closing Work 596	Glass Gauge 115	Bronze   107
Tee Branches for Sewer Pipe   7, 8   Soil Pipe   511, 512   Handle Stops   476-481   Tees. Brunch, Cast-Iron   48   Brass   76-481   Ess. Branch, Cast-Iron   27, 33, 34   Drainage, Cast-Iron   50, 50   Estra Heavy   38-41   for Cast-Iron Pipe   4   Lawler Patent   531   Long Turn, Cast-Iron   52, 35, 41   Malleable   59, 64   Estra Heavy   43   Estra Heavy   43   Estra Heavy   43   Estra Heavy   44   Ess. Branch Cast-Iron   59, 66   Estra Heavy   59, 66   Estra Heavy   50, 66   Estra Heavy   50, 50   Estra Heavy   50, 50	Glass Gauge 115	Bronze   107
Soil Pipe   71, 85	Glass Gauge   115	Bronze   107
Soil Pipe   71, 85	Glass Gauge   115	Bronze   107
Soil Pipe   71, 85	Glass Gauge   115	Bronze   107
Soil Pipe   71, 85	Glass Gauge   115	Bronze   107
Tee Branches for Sewer Pipe   7, 8   Noil Pipe   511, 512   Handle Stops   476-481   Tees, Brunch, Cast-Iron   48   Brass   24   48   48   48   48   48   48   48	Glass Gauge   115	Bronze   107
Soil Pipe   71, 85	Glass Gauge   115	Bronze

alves	Gate, Eddy 102-108	Valves, Water Relief and Pop Safety 135, 136	Water Gauges	11
14	" with Compound Screw 114	" Whistle 123	" Heaters 142-	14
6.6	Glohe, Ashestos Disc, Brass 77	Vases 252	" Instantaneous 530,	
1.0	Iron 93	Vent Branches, Soil Pipa 514	" Lifts, Eureka	
	" Brass 72	" Caps 516	" Meters 20,	-
	" E. H., Brass 75	Ventilators and Registers 141	" Motors	200
11			" Pipe, Cast-Iron	201
	Flanged, Diass 10	Globe and Star 155	" Pressure Regulators	
	110H Body	Vents, Air, Champion 529	Relief and Pon Safety Valves 135	9
	E. H 85	" Trap, McClellan 524	rener and I op bareey varves 100,	
		"Verona" Baths 350, 351	Water Works Gauges, Combination	11
**	" " Iron 91	Vertical Check Valves, Brass 72	'' Tools 236-	24
**	" Steel 92	" " Iron 111	Wax Tapers	
4.0	" with Lock Shield 73	" Jenkins Disc, Brass 74	Weber Corner Angle Radiator Valves -	8
	Greenhouse and Butterfly 218	" Foot Valves, Eddy 112	Wedges, Steel	24
44	Homestead, Brass 76	" Foot Valves, Eddy 112 Victor Air Valves 83	Well Casing, Standard	2
11	Hose, Brass 79	"Virginia" Stone Laundry Tuhs - 421-425	" Points 209-	21
84	" Gate, Eddy, Brass 102	Sinks 424-439	" Water and Rain Cocks	
4.0	Huh End, Gate 105, 110	Vises 224-226	Welshach Lights and Mantles'	18
11		Vulcan Chain Pipe Wrenchea 221	Weston's Differential Blocks	94
	Hydraulie 107, 118	vuican Cham ripe wienchea	Wheelbarrows	
	Independent Cut-off, for Eddy	MAINIMONEUT Proposition Tainte OF		
	Fire Hydrants 14	WAINWRIGHT Expansion Joints - 95	Whistle Valves	
44	Indicator, Eddy, Iron 104	Wall Hydrants, Ideal 18	Whistles	
+4	Iron Body 88-100	" Plates, Malleabla 61	White Metal Pantry Sinks	43
**	Jenkins Disc. Brass 74	Wash Sinks 418	Wilhelmi Copper Boilers	52
4.6	" Iron Body 91	Wash Tray Bihbs, Compression 488	Wilks Water Heaters	14
44	Lock Shield, Brass 73, 81	" Fuller 496, 497	Wire	25
	Pop Safety and Water Relief 135, 136	" Chains 467	" Cloth, Brass	21
	Pressure Regulator 97, 98	" Fittings, Lawler 581	" Guards for Gas Burners	
4.4	Pump Governor 99	". " Plugs 468, 469	Wizard Lawn Sprinklera	18
	Quick Opening 102, 104, 106	Washdown Closets 266, 272, 281, 290	Wood Sink Mats	49
**	Quick Opening 102, 104, 100	Jet Action Closets • - 266	Wool Felt Pipe Covering	14
	Rack and Pinion, Eddy 106			
	Radiator 77, 84		Wrenches 218-	14
	Air co, or	Washer Cutters 250		
4.	" Asbestos, Disc, Brass - 77	" Points 210	" Lowell Ratchet	22
-0	" Bress Disc 81	Washers, Ruhber, Fiber, etc 197	Wrought-Iron Couplings	4
**	" Corner 82	Washington Improved Melting Furnaces 240	Goose Necks	
- 11	" Angle 83	Washout Closet Bowls, Earthenware 302-305	" Nipples 46	, 4
11	" with J. D. · - 82	Enam. Iron 297	" Pipe 22	. 2
1.0	" Jenkins Disc, Brass 81, 82	" Closets 287-289, 291	" Quarter Bends	6
41	" Opposite Angle 80	" Enam, Iron 292	" Return Bends	6
	" Quick Opening 80	" Enam. Iron, Automatic 284	Wrought-Steel Sinks 444-	44
	" with Lock Shield 81	Waste and Overflow Connections - 455, 456	Trought Steet Status	
**	Reducing, Fisher 99	Waste Cans, Oil 186	V DENDO WILLIAM	0
11	Duther 108	Cotton 198	Y BENDS, Malleable	0
	Ruhber 196	" Nuts, Malleable 61	" Branches, Cast-Iron	2
**	Safety, Brass 78	Nuts, maneame 01	" " Flanged 84	, 4
	Iron Body 90	Water-Back Cleaners, Automatic Feed - 529	" Drainage, Cast-Iron · · -	5
2.0	Sewer 525	" Couplings 478	" for Cast-Iron Pipe	
**	Single Gate, American 113	Water Backs 582	" for Sewer Pipe	7,
4.6	Spigot End, Eddy 105	" Boilers 142-147	" Soil Pipe 512,	51
44	Steel 93	" Columns 116, 117	"Valves, Brass	7
11	Straightway, Blow-off 78	" Connections, Clow 171	Yarning Irons 243,	24
11	Homestead 76	" Cushions 529	"Yorkshire" Laundry Tubs 416,	41
	Swinging Check, Brass 78	" Feeders 151, 152	Sinks 426,	49
	Iron Body 89	" Filters 154	SIBKS 420,	20
64	Throatle Proce 79	" Fronts 532		
	Throttle, Brass 78	" Gauge Columns 116	ZERO Luhricators	12
**	" Iron Body 100	" Glasses 115	Zinc Bath Tuhs	35
	Vacuum, Brass 78	Giasses 110	AND AND A MAN	



